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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*On the Use of Common Salt in the Treatment of Intermittent Fever.* By JOSEPH C. HUTCHISON, M. D., of Brooklyn, N. Y.

THE extensive demand for sulphate of quinia, and its consequent high price, and, indeed, the frequent impossibility of obtaining it, in the portion of Missouri where I have recently practised, induced me to subject to the test of experiment various remedies which have from time to time been proposed, as substitutes for that invaluable medicinal agent, in the treatment of intermittent fever.

Among others, a succedaneum, quite recently presented to the notice of the profession, by Drs. Scelle Montdezert and Piorry (viz., common salt), has claimed our attention, and forms the subject of the present paper. For a history of its use by these gentlemen, their mode of administration, &c., the reader is referred to a paper, by W. P. Lattimone, M. D., in the *American Journal of Medical Sciences* for July, 1852. Professor Herrick, of Rush Med. College, has also reported two cases, in the *N. W. Med. and Surgical Journal*, for Sept., 1851, which go to corroborate the success obtained by MM. Montdezert and Piorry.

Although the credit of introducing chloride of sodium, as a remedy for intermittent fever, to the notice of the profession generally, is undoubtedly due to the French physicians above mentioned, it appears that it was used for this purpose prior to that time. Soon after I had commenced experimenting with it, I mentioned the subject to a neighboring physician (a gentleman of undoubted veracity and professional skill), who informed me, that some years previously he had heard of its being used as a domestic remedy for fever and ague by the people in that neighborhood. I also learned, from a highly respectable lady, that her husband's grandfather, many years before, was in the habit of curing fever and ague among his negroes, by giving copious draughts of salt water from a large salt spring on his farm.

Notwithstanding the favorable reports which have been made, the remedy has been but little used in this country, because its antiperiodic influence was doubted. And it has been thought not inappropriate again to introduce the subject to the notice of the profession, with the hope that it may receive more general attention. The experiments were commenced for the purpose of determining, with some degree of accuracy, a knowledge of its value in intermittent fever, by exhibiting it in a large number of cases. And no better field could have been selected for the experiment, not even the far-famed Pontine marshes, whether we consider the very general prevalence of the disease, or the protean and obstinate forms it here sometimes assumes. In consequence however of my removal to this city, it was prescribed in but twenty-two cases, occurring in twenty individuals, a summary of which is now presented as they were recorded; there has, consequently, been no attempt at a selection of the cases. I was enabled to ascertain the permanency of the cures in but three patients, and the condition of the spleen in but one. It would have been very desirable to have observed its effect on the spleen, which, according to Piorry, is diminished in volume with marvellous celerity. These unavoidable imperfections in the history of the cases

arise from the fact, that most of the patients resided at a considerable distance from my office, and were prescribed for without having been examined; and, indeed, from the very general prevalence of the disease, most persons have become so familiar with the use of quinia (which is usually kept in the house, and prescribed as a matter of economy and convenience by the head of the family, when necessary), that a resort to the physician in ordinary cases is rarely thought of. But I think we may safely surmise, that hypertrophy of the spleen existed in every case, excepting, perhaps, in cases 13 and 16, which were recent cases, occurring in very young subjects; because, in malarious districts, this pathological condition exists almost universally, and can be readily detected by careful percussion, even in persons who have never had what are commonly termed miasmatic diseases (intermittent and remittent bilious fevers), and who enjoy apparent good health. It appears to be the direct effect of the malarial poison, and it is a fact well known to practitioners in miasmatic districts, that in all diseases occurring there, even in those not strictly of malarial origin, the morbid effects of this poison are more or less obvious, requiring for their treatment specific remedies, in addition to their ordinary therapeia.

Case 1.—Elisha E., æt. 3 years, prescribed for April 28th, 1852. He had intermittent fever last spring, which was then checked, but returned the ensuing autumn, and has recurred at irregular intervals to the present time. Quinia, arsenic, &c., have been used. The present attack is of the tertian type. Skin pallid and sallow, and his general health is somewhat impaired. ℞. Chloridi sodii ʒij; mucil. ulmi f℥j. M. A teaspoonful to be taken every three hours, commencing twenty-four hours before the next paroxysm is expected.

I was informed by his father to-day (May 3d), that the paroxysms were at once arrested by the above mixture. There was no disturbance of the stomach or bowels. Thirst.

Case 2.—S. M., farmer, æt. 30, prescribed for May 3d, 1852. He contracted intermittent fever last autumn, and

relapses have occurred, at intervals of a few weeks, to the present time, notwithstanding the abundant use of quinia, and other tonics and anti-periodics. The present attack has existed for several days, and presents the quotidian form. His complexion exhibits the appearance characteristic of the disease. ℞. Chl. sodii ℥j; mucil. ulmi. f℥ iv. M. Tablespoonful every two hours during the next intermission, as there is not now sufficient time to take the requisite quantity before the paroxysm is expected. On the 5th the chill returned at the usual time (although the salt was taken as directed), but in a much milder form; thirst; four dejections without pain, and no nausea.

This patient was accustomed to having his chills arrested immediately by sulphate of quinia, and was unwilling to risk again the prophylactic virtues of the chloride. But, from the marked diminution of the violence of the paroxysms, there is great probability that, if it had been continued, it would have arrested the disease. The disorder was suspended by liq. potass. arsenit. gtt. xv, ter in die.

CASE 3.—Elizabeth M., æt. 13, quotidian intermittent; prescribed for May 5th. The present attack has existed several days. She had the disease last autumn, and occasional relapses have occurred to the present time, sometimes assuming the quotidian form, and at others the tertian. Has been accustomed to use quinia to arrest the paroxysms. General health pretty good during the intervals of the attacks. She was ordered chl. sodii ℥ij in mucilage every three hours until six drachms were taken, commencing eight hours before the return of the paroxysm was expected. The disease was thus immediately arrested. She vomited once after taking the second dose, which was soon repeated and well retained. Four dejections, without griping; no nausea; thirst.

She was directed to take a drachm of the chloride night and morning for three or four weeks, as a prophylactic. The disease subsequently returned, but I could not learn with accuracy how long it was kept in abeyance. Her father

informed me, however, that it did not return so soon as it had formerly done, after the use of quinia.

Case 4.—T. G. M., farmer, æt. 30, prescribed for 5th of May, for the tertian form of intermittent fever. He had the disease last September; it was then checked, and he has been free from it until three weeks since, when it returned, and was promptly arrested by sulph. quinia. Since then he has been using, as a prophylactic, bitters composed of bark, gentian and rhubarb, but a relapse occurred, notwithstanding, on the 21st day. His skin is pallid, but he feels pretty well during the intermission. He was ordered chloride of sodium ʒij in mucilage, every four hours, commencing fifteen hours before the paroxysm is expected to return, and to take four doses. Only six drachms (three doses) were taken, the paroxysm having occurred one hour after the last dose, and six hours earlier than it was expected. There was thirst, but no disturbance of the stomach or bowels. This patient objected strongly to the taste of the remedy; and, as he doubted its efficacy, and was very anxious to have the disorder *immediately* arrested, I prescribed sulph. quinia grs. x, aromatic powder grs. x, opium gr. j; to be taken five hours before the next paroxysm was expected. This promptly checked the disease.

The above case was very unsatisfactory in determining the value of the remedy. It cannot be counted a failure, nor, indeed, have we any positive evidence it would have produced the effect desired, if the quantity prescribed had been exhibited. I may remark, *en passant*, that I usually prescribe ten grains of quinia at a single dose, in intermittent fever, five hours before the accession of the paroxysm, combined with an equal quantity of aromatic powder, when there is a want of gastric sensibility, and sometimes with an opiate, or a purgative dose of calomel, when indicated. Given in this dose, a concentrated effect is developed at the proper time, which makes it more potent in arresting the disease, than if distributed over a long interval: a second dose is rarely necessary. It is preferable, also, as a matter of convenience to the patient.

Case 5.—Leonard W., æt. 6 years, prescribed for May 8th, 1852. He contracted intermittent fever last November, and relapses have repeatedly occurred during the winter and the present spring. He has now had two paroxysms, occurring on alternate days. Skin pallid and sallow, but he complains of no particular disorder during the intermission. ℞. Chloridi sodii, ʒijss. To be taken in mucilage, before the next paroxysm is expected. The chill returned on the 10th, at the usual time, and the following mixture was then ordered: ℞. Chloridi sodii ʒiv; mucil. ulmi fʒ ij.; tablespoonful every four hours, commencing fifteen hours before the next paroxysm is expected. This increased quantity of the salt promptly arrested the disease. No nausea or purging; thirst. From the readiness with which the second paroxysm was arrested by four drachms of the salt, it seems not improbable that the first might have been prevented, if as large a quantity had been given. Of this, however, we can only surmise.

Case 6.—A negro woman belonging to Mrs. S., æt. 20. She has been subject to the tertian type of intermittent fever for several months, it having been from time to time suspended by quinia. The present attack (May, 1852) has existed four or five days. Her general health is somewhat impaired. ℞. Chl. sodii ʒix; mucil. ulmi fʒiij, M. A tablespoonful every three hours, commencing eighteen hours before the next paroxysm is expected. The above dose promptly arrested the disease, nor had there been a relapse up to May, 1853 (one year from the time the salt was prescribed), as I learned from Mrs. S. There was thirst, but no disturbance of the stomach or bowels followed the use of the remedy.

The promptness and permanency of the cure in this case is very remarkable, when we consider the length of time the patient had been subject to the disorder, and the frequent relapses which occurred when it had been suspended by the use of quinia. So well pleased was Mrs. S. with the effect

of the remedy in this case, that she subsequently wrote me from Virginia, where she had gone to visit her daughter, requesting the recipe for the "invaluable prescription," for the benefit of her friends there.

Case 7.—Ellen B., æt. 4 years, prescribed for August 1st., 1852. She had intermittent fever for the first time last summer, and since then the paroxysms have recurred at irregular intervals to the present time. They have been suspended sometimes by quinia, and at others by liq. potass. arsenit. The present attack has existed for several consecutive days. Skin pallid and icterode, and her general health is considerably impaired. ℞. Chloride sodii ʒiv; mucil. ulmi fʒij. M. A tablespoonful every three hours, commencing twelve hours before the next paroxysm is expected. The disease was thus at once arrested. Thirst; no disturbance of the chylopoietic viscera.

Case 8.—Mary B., æt. 6, sister of last patient, was prescribed, at the same time, for a like form of the disease. She has also been subject to occasional attacks of intermittent fever for the last twelve months, which have been checked from time to time by the usual remedies. Her aspect and general health is similar to that of the last patient. She was also ordered the same prescription, which had the effect of at once suspending the disease.

Case 9.—Anna B., æt. 9, sister of the last two patients, was prescribed for August 4th. She has also been a victim of intermittent fever for twelve months or more, the paroxysms recurring every few weeks. The present attack, which has existed several days, offers the quotidian variety. Skin pallid and icterode, and her general health is much impaired. ℞. Chloridi sodii ʒv; mucil. ulmi fʒiiss M. A tablespoonful every third hour, commencing fifteen hours anterior to the time for the next paroxysm. By this treatment, though the disease was not checked, the paroxysm was postponed two hours. The same plan of treatment was directed for the next day, that had been pursued the day previous, which completely arrested the disease.

We may very justly infer from the history of the last three patients, that there was considerable visceral derangement and impairment of the general health. The cases had proved exceedingly rebellious to the ordinary remedies, and even when under the potent influence of sulph. quinia, the paroxysms often persisted for several days *seriatim*. The strongly marked. I regret that the permanency of the cure antiperiodic effects of the chloride here was certainly very was not reported to me.

Case 10.—A negro girl belonging to Mr. C., æt. 15, prescribed for August 5th. She had intermittent fever last autumn, and the ensuing spring, but has been free from it for several months, until to-day. Her general health is moderately good. As it was uncertain what type the disease would assume, she was ordered chl. sodii ʒvj dissolved in mucilage, to be taken in divided doses at suitable intervals, before the hour for the chill to-morrow, anticipating it might prove to be of the quotidian type. The paroxysm returned on the next day, notwithstanding the treatment, and for two consecutive days without any obvious amelioration. Mrs. C. then gave a teaspoonful of corn meal mixed with water, every two hours during the next intermission, after which the disease did not return. There was thirst, but no disturbance of the stomach or bowels from the chloride.

Corn meal, I may remark, is a domestic remedy for ague and fever, often used by this family, and others in that neighborhood, and it is said, in most instances, to check it at once. It would *seem*, in the above case, to have been efficacious. At any rate, the salt was here considered a failure.

Case 11.—A negro girl belonging to Mr. S., æt. 12, prescribed for August 6th. She has had the tertian form of intermittent fever four or five days. Never had the disease before, although it has prevailed extensively in the family. General health good. As the paroxysm was expected in nine hours from this time, she was ordered chl. sodii, ʒi, dissolved in mucilage, *every hour*, until she takes six doses. On the 7th, the disease returned at the usual time, each dose of

the chloride having been soon followed by emesis. She was then directed ʒss doses at sufficient intervals to allow ʒvij to be taken during the next intermission. On the 11th, I learned that the vomiting continued, though less frequently, and that the paroxysms still recurred, but in a milder form. Quinia was then prescribed, and the disease immediately subsided. Thirst, but no nausea or dejections.

In consequence of the emetic effect of the salt in the above case, it cannot be considered a fair test of its anti-periodic virtue, as it is probable a very small portion of the amount taken was retained. The paroxysms, notwithstanding, became milder, but this may have been owing to the influence of the vomiting *per se*.

Case 12.—A negro girl, æt. 18, the property of Mr. D., prescribed for, August 20th. Her master informs me that she has had the tertian form of intermittent fever for three months, it having been suspended from time to time by quinia, &c., to return again on the 7th, 14th, or 21st days. She has now had two or three paroxysms, occurring on alternate days. Her general health is somewhat impaired, ℞. Chl. sodii ʒix; mucil. ulmi fʒiij. M. A tablespoonful every three hours, commencing eighteen hours before the next paroxysm is expected. Nine drachms of the salt were taken, which immediately arrested the disease; nor did it return until Nov. 1st, as will be seen by referring to Case 20. No nausea or purging; thirst.

Case 13.—Child of Mr. D., æt. two years; prescribed for August 23d, 1852. It has had the quotidian form of intermittent fever six or seven days; never had the disease before. ℞. Chl. sodii ʒiss; mucil. ulmi fʒss. M. A teaspoonful every three hours, commencing twelve hours before the time for the next paroxysm. This patient subsequently had several paroxysms; the chloride, as I learned from its father, having produced no obvious benefit and no disturbing effects. It was not repeated. Sulph. quinia was then prescribed which at once suspended the disease.

The parents of this child were of the lower order of Irish,

who, as is well known to physicians that prescribe much for them, are not in the habit of rigidly following directions in the administration of medicines; and I have reason to suspect that the mixture was not exhibited properly in this instance.

Case 14.—Joseph M., æt. 16; prescribed for August 28th. He contracted intermittent fever last autumn, and since then he has suffered with frequent attacks of the disorder, which have been suspended by the preparations of bark, &c. The present attack, which commenced five days since, offers the tertian form. Skin pallid and icterode; but he feels very well during the intervals of the attacks. ℞. Chl. sodii ʒvi; mucil. ulmi fʒij. M. A tablespoonful every three hours, commencing twelve hours before the next paroxysm is expected. He had a paroxysm at the usual time, on the day he took the above prescription, but none subsequently, although nothing more was taken to arrest the disease. Free vomiting of bilious matter occurred soon after the cold stage subsided.

Case 15.—Elizabeth M., æt. 12; sister of last patient. She was also prescribed for on the 28th for the same form of intermittent, which had existed with frequent suspensions since the preceding autumn. Skin pallid and sallow; general health impaired. ℞. Chl. sodii ʒvi; mucil. ulmi fʒij. M. A tablespoonful every three hours, commencing twelve hours before the time for the next paroxysm.

This prescription had no obvious influence in mitigating the disorder, and was not repeated, because the patient lived some distance from me, and did not again apply until she had had four or five additional paroxysms. Quinia was then prescribed at her request, which at once checked the disease. Copious bilious vomiting also occurred in this case soon after the algid stag of the paroxysm, which immediately succeeded the use of the chloride, had subsided.

Case 16.—Son of Mr. J. S., æt. 2½ years; prescribed for Sept. 17th, 1852. He has had the quotidian form of intermittent fever for several days; has never had the disease before. Health always perfectly good anterior to the present

indisposition. The following mixture was ordered: ℞. Chl. sodii ʒiss; mucil. ulmi fʒi. M. Two teaspoonfuls every three hours, commencing twelve hours before the period for the return of the paroxysm. The disease was thus at once arrested. No nausea, but some alvine discharges; thirst.

Case 17.—A sister of the last patient, æt. 5 years; prescribed for also on the 17th, for the same form of the disease. This too is a recent case, and the patient's general health is pretty good. The paroxysms have now recurred for five consecutive days. ℞. Chl. sodii ʒij; mucil. ulmi fʒij; to be taken in tablespoonful doses every three hours, commencing twelve hours before the next paroxysm is expected. The direction was misunderstood, so that but half the quantity prescribed was administered, which, however, had the effect of promptly arresting the disease. Several dejections; no nausea or vomiting; thirst.

Case 18.—Reuben D., farmer, æt. 40; prescribed for Sept. 17th. He contracted intermittent fever about twelve months ago; and since then, it has continued to recur at irregular intervals, although quinia has been freely used, both to arrest the disease and as a prophylactic. Complexion pallid and slightly sallow; but he feels pretty well during the apyrexia. ℞. Chl. sodii ʒix, mucil. ulmi fʒiij; to be taken in tablespoonful doses every three hours, commencing eighteen hours before the time for the next paroxysm. This treatment failed to arrest the paroxysms, nor were they postponed or rendered milder. Twelve drachms of the chloride were then directed during the next apyrexia, in ʒij doses every three hours, beginning eighteen hours before the disease is expected to recur. This increased quantity of the remedy had the effect of suspending the paroxysms at once, and most likely it would have done so in the first instance. There was no disturbance of the chylopoietic viscera; thirst.

Case 19.—Emma H., æt. 5; prescribed for Oct. 30th. She contracted intermittent fever about a year since, which has continued with irregular intervals of exemption to the present time. It has sometimes assumed the tertian and at

others the quotidian form. She has used for it both quinia and arsenic. The present relapse recurred four days since, and is of the tertian type. Her complexion is pallid and sallow, and there is a feeling of general *malaise*. ℞. Chl. sodii ʒiv, mucil. ulmi fʒiss; half tablespoonful every three hours, commencing eighteen hours before the next paroxysm is expected. This treatment suspended the disease at once. Thirst; no nausea or vomiting; no dejections.

Case 20.—Negro girl, æt. 18, belonging to Mr. D.; prescribed for to-day, (Nov. 1st.) This is the same patient whose case was described in No. 12. She has been free from intermittent fever from that date (Aug. 20th) to the present time, when the disease again appeared in the tertian form. General health improved. Chl. sodium was again prescribed, ʒx, during the intermission, at suitable intervals, which immediately suspended the disease.

By referring to Case 12, it will be observed, that there was a much longer immunity from the disorder, after it had been checked by the salt, than had existed at any time since the disease was first contracted, notwithstanding the *magnum remedium* had been previously repeatedly used to arrest the paroxysms.

Case 21.—The master of the patient (Cases 12 and 20,) called again to-day (Feb. 4th, 1853) for the "salty mixture" which had previously been prescribed for his negro girl with such happy effects, the disease having again returned, after an interval of more than three months. Ten drachms of the chloride were ordered, in divided doses, during the next apyrexia, which checked the paroxysms as promptly as it had formerly done. Nor had there been a relapse up to July 5th, (five months.) No disturbance of the chylopoietic viscera, but thirst as before.

A striking fact will be observed in the history of this patient. The paroxysms were not only at once suspended in every instance, but the disease was kept much longer in a state of temporary extinction, when checked by the chloride, than when quinia had been used for the same purpose. This

may be an accidental circumstance, occurring independently of the greater remedial or prophylactic influence of the chloride in this instance; but to justify such an inference would require pretty clear evidence, when we remember the much more frequent occurrence of the relapses after the use of quinia.

Case 22.—Miss Matilda G., æt. 20; prescribed for April 27th, 1853. She contracted intermittent fever about twelve months ago; since then it has continued to recur at irregular intervals, sometimes assuming one form and at others another. She has used arsenic, quinia, &c., which produced a temporary suspension of the disease. The recent paroxysms of fever have been accompanied by frontal neuralgia, which begins and subsides with them; and sometimes the neuralgia occurs alone, apparently as a substitute for the intermittent fever. They have occurred simultaneously for the last four consecutive days. Her skin is pallid and sallow, and she complains of general debility and *malaise*. The following mixture was prescribed to-day: Chl. sodii ℥ix; mucil. ulmi f℥ iij. M. To be taken in tablespoonful doses every second hour, commencing twelve hours before the time for the next paroxysm. From some cause or other she omitted one dose, so that but viiss℥ of the salt were taken.

On the 28th, the paroxysm returned in a much milder form, having been postponed three hours: repeat same prescription. On the 29th, the disease recurred in a more severe form than yesterday, but was again postponed (one hour). The suffering arising from the combined influence of the two disorders was so great, that the patient was unwilling again to rely on the chloride to arrest the succeeding paroxysm. Twenty grs. of chinoidine were accordingly prescribed, which at once arrested the disease. The salt produced thirst, but no disturbing effects.

Notwithstanding the above case was one of long standing, the general health considerably impaired, and the complication of neuralgia existing, the remedy exercised so favorable an influence, as to induce me to believe it would have

been efficient in suspending the disease, if it had been used perseveringly.

RECAPITULATION.—*Age.*—9 were under ten years of age, 6 between twelve and twenty, 4 between twenty and forty, and 1 at forty.

Sex.—7 were males, 12 females, and 1, sex not known.

Race.—16 were white, and 4 black.

Proportion of Cases cured, benefited, &c.—Of the 22 cases reported, in 12, or 54.5 per cent., viz., Nos. 1, 3, 6, 7, 8, 12, 14, 16, 17, 19, 20, 21, the paroxysms were immediately suspended. Nos. 12, 20, 21, occurred in the same patient.

In 3 of the cases, or 13.6 per cent., viz., 5, 9, 18, one paroxysm only occurred after the remedy was commenced. It was completely successful, therefore, in 15 cases, 68.2 per cent. In cases 2, 11, 22, the paroxysms were postponed or moderated. No. 11, it will be remembered, vomited after each dose, so that the salt was not returned in sufficient quantity to have produced any marked antiperiodic effect. For No. 2, 4, 13, and 15, the remedy was not prescribed a second time, the patients objecting; an increased dose might have arrested the disease. Case 4 did not take all that was prescribed. In one case only (No. 10), after fair trial, was there no obvious good effect from the remedy.

Permanency of the Cures.—In three of the patients only, for reasons which have been elsewhere stated, was I enabled to ascertain with any degree of accuracy the permanency of the cures. Cases 12, 20, 21, which occurred in the same patient, had longer intervals of immunity from the disease each time when checked by the salt, than when quinia had effected the same purpose; and when last heard from, five months had elapsed without a return of the malady. It was said of No. 3, that the disorder did not return so soon as it had previously done when checked by quinia; and of No. 6, it will be remembered, that the patient had not relapsed twelve months after the paroxysms had been checked by nine drachms of the salt, although they had previously returned quite frequently after the use of quinia. So far as the evidence goes,

therefore, (which, however, is too limited for a general conclusion,) it indicates the superiority of the chloride of sodium over the usual remedies in the permanency of the cures effected by it. And here we should not lose sight of the favorable influence that *may* have been exerted by the quinia before the salt was prescribed.

The difficulty of effecting positive cures of intermittent fever by any remedy or course of treatment, however rigidly pursued, is very great, and sometimes impossible, even though prophylactics be continually used, as long as the individual remains exposed to the cause which developed it. The writer can here speak emphatically, because he has, on two different occasions, been compelled to "fly his country" in order to get rid of this harassing pest. In a number of cases, and among others now distinctly remembered are No. 6 and 7 detailed above, the paroxysms *would* recur every two or three weeks, notwithstanding quinia with Vallet's mass and other remedies to relieve the disordered viscera, including counter-irritation over them, were diligently plied.

Duration of the Disease, and general Health of the Patients.—In a large proportion of the patients the disease had existed a very long time. Of most of them it is noted, that they had been its victims from six to twelve months. By this it is not to be understood that the disorder then commenced *de novo*, but that it had recurred more regularly and with shorter intervals during that period than previously; for many of them had been its victims for a much longer time, and indeed a few could scarcely remember any period of their lives when they were not from time to time subject to the disease. In four cases (11, 13, 16, 17), the patients had never had the disorder before; and in most of them (all but the very recent ones), there was of course more or less impairment of the general health, with visceral obstructions.

Modus Operandi.—We have seen that chloride of sodium *does* cure intermittent fever, and now the interesting question arises, What is its *modus operandi?* Upon this subject there is a variety of sentiment. It is the opinion of M. Scelle Mont-

dezert "that paroxysmal fevers arise from the presence of fibrin in the venous blood," and that the salts of quinia, and also *chloride of sodium*, "owe their efficacy as antiperiodics to the fact that they dissolve the fibrin abnormally present, thus restoring the venous blood to its normal conditions." (See Dr. Lattimore's paper.) I suppose he means *excess* of fibrin, or of colorless corpuscles (which, as Mr. Paget remarks, cannot, by any mode of analysis yet invented, be separated from the fibrin of mammalial blood),* or of both, constituting the disease which Prof. Bennet, of Edinburgh, calls, very significantly, *leucocythemia*, and which he has recently described as occurring in cachectic states of the system, attended with organic disease of the lymphatic glandular system, and more particularly of the spleen, which he includes in that class. Not having seen the memoir of Montdezert on this subject, which was presented to the French Academy of Medicine, I am unable to say how his conclusions were arrived at; whether they are the result of a carefully conducted analysis of the blood, before and after using the remedy, or merely a conjecture. It would be necessary, in order that his views be generally adopted, that they should be based on very satisfactory evidence. The enlightened state of medical science at the present day, and the rigorous exactness to which it is aspiring, demands that all its facts should rest on the most indubitable evidence of their truth.

It is believed by M. Piorry (who was one of the committee appointed by the Academy to report upon the memoir of M. Scelle Montdezert), that enlargement of the spleen is the cause of all paroxysmal fevers, and that chloride of sodium cures intermittent fever, like the sulphate of quinia, by acting on the spleen and diminishing its volume, and this sometimes in less than a minute. We are prepared to admit, that the spleen, when of abnormal size, *tends* to keep up the disease when once contracted, and that it is diminished in volume by sulphate of quinia and chloride of sodium (but not *pari*

* Kirkes & Paget's Manual of Physiology.

passu) with the fever; for we feel quite sure that the fever is often cured, whilst the spleen remains moderately enlarged. And the fact which he announces, that "whenever the spleen has a greater length (measuring in a line from the middle of the axilla to the anterior superior spinous process of the ilium) than from 31 to 33 lines, intermittent fever exists," is certainly *not* true in the malarious districts of this country, if it is otherwise in the field of Piorry's observation. If this were a fact, there are very few of the denizens of *our* miasmatic regions who would not be doomed victims of the disease; because, as has been already stated, enlargement of the spleen (often to the extent of 31 or 33 lines in its longitudinal diameter) exists almost universally in such localities, in persons who have for some time resided there, even though they may never have had intermittent fever, and *a fortiori* in those who *have* had the disease, but have for a long time enjoyed an absolute immunity from it.

A theory of its mode of acting, which, it occurs to the writer, is more consistent with reason and established truth, is, that chloride of sodium (being an antidote to the poison which produces intermittent fever, in certain doses) enters the circulation by means of absorption, and neutralizes the miasmatic effluvia which probably operate on the system through this channel; or, in other words, that it develops a condition of the system which is inconsistent with the existence of malarial disease.

We know that bark is an antidote to the miasmatic poison, because, in most instances, its constant use will keep off such diseases from individuals who have been subject to them, and that they return when the remedy is omitted, if the individual continues exposed to the cause which produces them. We can have no better illustration than this of the sequence of cause and effect. Our experience with chloride of sodium in paroxysmal fevers has not yet been sufficient to determine accurately its value, in preventing a recurrence of the attacks when constantly used; but there is every reason to believe

it will prove not much inferior to the preparations of bark, and for the same reason.

Common salt may also act beneficially in intermittent fever by increasing the quantity of red globules in the blood, thereby removing the anemia which is one of the most constant concomitants of the disease. According to the experiments of M. Plouviex, made upon himself at intervals during twenty-five months, a saline regimen has the effect of *increasing the weight and strength of the body.* He began with a teaspoonful daily, which he increased to a tablespoonful, continuing to take this dose on several occasions, for a period of three or four months. The regimen appeared to produce *plethora.* The blood, analyzed while under the full effects of the salt, was found to contain more of the *globules* and salts, but less of the albumen and water.—*United States Dispensatory.*

Dose and Mode of Administration.—The quantity given varied from eight to twelve drachms during the apyrexia. At first, eight drachms were given, but the amount was subsequently increased to nine, ten, and even twelve drachms in one instance, with obvious benefit. Children required somewhat larger proportional doses than adults.

Mucilage of elm was selected as the vehicle, on account of its convenience, and because it sufficiently disguised the remedy, which was deemed a matter of importance; for it would have lost much of its efficacy, or have been repudiated altogether, had the patients known they were taking simply common salt; as it is well known to physicians that the influence of the mind upon this disease is very considerable. The following was the formula used:

℞. Chloridi sodii ℥iij.
Ulmi pulv. ʒiij.
Aq. bullientis f℥viii.

Infuse two hours and strain. This forms a saturated solution. Dose, a tablespoonful every two, three, or four hours, so that five or six doses may be taken during the apyrexia. It was not deemed necessary to precede its employment by evacuants, because the patients had recently used such remedies during their former attacks; and moreover, I preferred to

use the salt alone, because its real value could thus be better determined. When it is necessary to precede the use of the salt as an antiperiodic, by emetics or cathartics, perhaps there is nothing better for the purpose, in ordinary cases, than the same remedy administered in emetic doses, which will usually produce also moderate catharsis.

Disturbing Effects.—In most of the cases the remedy was well tolerated by the stomach, nausea or vomiting having occurred in but four (3, 11, 14, 15). Four cases also (2, 3, 15, 17,) had moderate alvine evacuations, unattended with pain. There was considerable thirst in every case; no other unpleasant effects. When given in the above manner (dissolving it in as small a quantity of water as is possible), it is less likely to disturb the stomach, than the same or even a less amount would in a larger proportion of the solvent. The taste was objected to by some, whilst others disliked it much less than quinia.

Conclusions.—From our experience of the antiperiodic virtues of chloride of sodium as detailed above, we think the following conclusions may be legitimately deduced:

I. Although inferior to cinchona and its preparations, it yet forms a *very good substitute* for them in intermittent fever, having failed, as we have elsewhere seen, to produce a speedy suspension of the paroxyms in 31·8 per cent. of the cases only: in a majority of cases therefore it may be substituted for quinia.

II. It may be used instead of, and indeed *preferably* to quinia, first, in cases not unfrequently met with, where the latter remedy is forbidden by the very unpleasant nervous and cerebral symptoms it produces (delirium, tinnitus aurium, cephalalgia, faintness, &c.), an example of which I have recently seen in the New-York Hospital, when sulph. copper was substituted. Secondly, where quinia, from frequent repetition, has lost its effect in ague. Thirdly, it is commended on the *score of economy*, which is a consideration of importance to the poor especially, who are now in a measure debarred from the use of quinia by its high price. And

fourthly, it is always at hand, whilst quinia sometimes cannot be obtained.

III. It has been found to be *more energetic* in curing ague than any of the vegetable or mineral tonics commonly used for that purpose, excepting bark, and should therefore be preferred to arsenic, which has been ranked by M. Andral, Prof. Wood, and indeed most other authorities, next in value to quinia. And moreover, I think arsenic should never be used until after quinia and *common salt* have failed to do good, on account of its unpleasant and sometimes disastrous consequences to the general system and stomach, and the increased facilities it affords for using the remedy as a toxicological agent.

Green Ave., January, 1854.

ART. II.—*Case of Perforation of the Rectum, followed by an Extensive Fæcal Abscess of the Nates.* With Illustrations. By LEWIS A. SAYRE, M. D., Surgeon to Bellevue Hospital, etc., etc.

ON Saturday, 23d July, 1853, I was called about 11 P. M. to see the Rev. Dr. B., who was said to be dying with what was called "Neuralgia of the Rectum." He had had a severe rigor about 4 o'clock that afternoon, which lasted about three hours, and left him in a state of great prostration.

I found him bolstered up in bed between two persons, who were fanning him, chafing his temples, and endeavoring to make him swallow some stimulants; his surface was cold and clammy, bathed in perspiration—mouth partially open—lips almost bloodless—pulse 140, very feeble and intermittent—constant hiccough, and complaining of intense pain in the rectum and nates, with an inability to pass his urine. Upon placing my hand upon his nates, I distinctly felt crepitation, and heard gurgling of air, deep underneath the glutei muscles, which were hard, firm to the touch, and distended in all directions to such a degree as to make his nates much too large to correspond with his legs, arms,

and other parts of his frame. On passing my finger into the rectum, I distinctly felt the edges of an old, hard, and well-defined ulcer, situated just below the upper edge of the superior sphincter, and in the posterior aspect of the intestine. I immediately pronounced it a case of internal fistula, or a fæcal abscess, which had been caused by the escape of fæces through the perforation of the bowel. But I found it impossible to convince him of the correctness of my diagnosis, as he had been most positively assured by his homœopathic attendant (who had been in attendance previous to my being called, and who had seen him that very day) that it was a clear case of pure "Neuralgia of the Rectum," or "Rheumatic Gout of the Rectum," and they had thoroughly succeeded in convincing him of the correctness of that diagnosis.

By continued gentle pressure upon the two nates, the air was expelled into the rectum, and the pressure being taken off from the bladder, he was enabled to pass his water, and was much relieved of his intense suffering. As he had had no sleep for many days, and was much exhausted, I administered an anodyne with stimulants, and ordered him some broth, and covered the nates with an anodyne poultice.

24th.—I saw him early in the morning, and found that he had passed a comfortable night, and had had more sleep than for two weeks past; but was still unwilling to admit the correctness of my diagnosis. I therefore sent for Professor Parker, who came immediately and examined him with his finger in the rectum, and perfectly confirmed my previously expressed opinion; but finding him so extremely reduced that it would be dangerous to hazard his life by so extensive an operation as it would require to lay open the immense abscess which had been formed, he therefore advised that I should endeavor to sustain his system awhile, allay the pain by narcotics, remove the inflammation and hardness of the nates by the constant application of poultices, and express the air whenever the cavern became filled with gas, and to

postpone the operation until his system was better able to rally from the shock which it would necessarily produce.

25th.—Found him suffering great pain in the nates, and very restless—had had a free passage from the bowels of softened fæces about six hours previous, without much pain at the time of the passage, but in from two to three hours after the operation the pain became intense, and the fulness and distension of the nates much more marked; this he stated had been the case after every passage for some months, the pain always being very much worse some hours after the operation than at the time of the passage. I accounted for this phenomenon from the fact that at each passage a small portion of fæces would escape through the perforation, and, in a few hours, becoming decomposed, would form a large amount of gas, and thus, by its distension, produce the pain. By gentle pressure upon the nates the gas could be easily expelled into the rectum with immediate relief from the pain, after which he would be comparatively easy until the following day, when, after another passage, the same routine would be passed through. He continued in the same condition, with but slight change, for eight days, when the excessively hot weather caused such rapid decomposition that I was summoned in haste to see him, and found him cold, almost pulseless, constant hiccough, great tympanitis, and retention of urine. On passing the catheter until I reached an inch or more beyond the ordinary length, the water began slowly to flow out of it and to drop immediately from the extremity of the catheter, without describing an arc, pressure being required over the bladder in order to empty it. The bladder contained only about half a pint of urine, and the abdomen was as much distended as before the urine was drawn, and much more resonant upon percussion. Upon examining his nates I found the whole glutei muscles of either side distended to their utmost, and just between the tuber ischii and trochanter major of the left side, about six inches from the anus, finding a more prominent point than at any other place, I

plunged an exploring needle into it, and was compelled to pass two inches and a quarter before the point became free; when I withdrew the instrument, it was instantly followed by a shrill, whistling noise, and the most offensive odor that I ever experienced. Another opening was made in the opposite nates, through which the gas escaped freely; but, as the great tension had been removed, it was not accompanied with the same whistling sound which attended the first puncture. As soon as the gas had escaped, his breathing became easy, his abdomen flaccid, and all his symptoms of immediate suffocation subsided. Finding from the odor that the cavern contained other material than gas, I made a free incision into the first puncture, and to my utter amazement obtained, by measurement, over one quart of fæces and matter, in addition to what was necessarily lost in the tapping. After the incisions, an injection, passed in at one side, flowed freely out at the opposite opening. A probe passed readily from each of these openings into the rectum and swept over a large surface under the glutei muscles, but his condition was entirely unfit to risk the incision through the muscles into the rectum.

He continued rapidly to improve after these free incisions were made, having his bowels regularly moved every day without assistance, and at each passage a free discharge of fæces from each of the openings; after which it was injected freely to keep the cavern clean, and he was fed on the most generous diet with stimulants.

In ten days after the abscess had been punctured, his general health had so much improved, that upon consultation with Dr. Parker we concluded that it would be safe to make the incisions into his rectum, but on account of his great debility we were afraid to administer any anæsthetic, and were compelled to rely chiefly upon brandy to enable him to sustain the operation.

On the 13th August, assisted by Drs. Parker, Thebaud, and Mr. Bartholf, my student, I proceeded to make the necessary incisions.

The patient was laid upon his side and face, with his limbs slightly flexed, and nates exposed to a good light, when a probe was passed, from the right external opening four inches from the anus, three inches and a half before it reached the ulcer in the intestine. With a long probe-pointed bistoury pushed down upon the finger in the rectum, a single cut sufficed to lay the parts freely open. The parts divided were firm, almost cartilaginous, from long-continued inflammation. There was not much hemorrhage, but still the patient sank considerably and required very free use of brandy. After some few minutes, however, he rallied, the pulse became stronger, and it was thought by those present that he would be able to bear the incision upon the opposite side. Not having a probe-pointed bistoury of sufficient length to reach from the external opening into the rectum, which was nearly six inches, I took a long straight-pointed knife, and passed it down upon my finger into the rectum, and made a rapid incision through all that portion of the gluteus maximus muscle included between it and the anus. The hemorrhage was considerable, but readily checked by ice and pressure, only one ligature being required.

The patient bore the operation with the most heroic fortitude, never uttering a groan or complaint, and at its completion expressed great delight that it was over, and immediately rolled upon his back, and swooned. His mouth fell open, the surface became pale, the pulse ceased at the wrist and elbow, and the heart was scarcely audible, respiration ceased entirely, and in fact he was to all appearances *dead*. Immediate resort was had to artificial stimuli, as mustard and hot water externally, and brandy and ammonia was attempted to be administered internally; but finding him unable to swallow, artificial respiration was immediately resorted to, and it became necessary to continue it for some minutes before respiration took place, after which brandy and ammonia were administered, *ad libitum*, until complete reaction ensued, which occupied nearly an hour and a half from the operation, during which time he drank over a pint of brandy, and nearly a half ounce of aqua ammoniæ.

The cavern, which was considerably larger than the head of a fœtus at the sixth month, and lined with black, ragged, fetid sloughs, was then filled with lint, saturated in Le Doyen's disinfecting fluid, and covered with ice to prevent hemorrhage. I administered 15 drops of Magendie's solution, and left directions for him to take brandy and beef-soup every hour. In the evening I found him tolerably comfortable, pulse 110, but quite firm and regular; had had three hours of refreshing sleep since the operation, but was unable to evacuate his bladder, which was emptied by the introduction of the catheter, which operation was repeated about 12 o'clock at night.

August 17, 6 A.M.—Introduced the catheter and evacuated the bladder, which had not yet recovered its contractile power, and required pressure over the abdomen in order to make the urine flow. In all other respects as comfortable as could be expected.

1 P.M.—After again drawing off his water by the introduction of the catheter, with the assistance of Dr. Thebaud and Mr. Bartholf, I removed the lint from the wound, which was excessively offensive, and made a more careful examination of the cavern than had been done the day before.

The coccix had sloughed from the sacrum, and two of the coccigeal bones were found loose in the wound; the fingers could readily pass under the swollen integuments on the posterior aspect of the sacrum, nearly as high up as its junction with the lumbar vertebræ. In order to relieve the tension over the sacrum, a third incision was deemed necessary, and made between the two others, nearly parallel to the sacrum, and about two inches in extent; the sacrum was not denuded of its periosteum, except at its coccigeal extremity, which was readily felt to be exposed, by the probe or finger-nail. The sacro-ischiatic ligaments of the left side were exposed and partially sloughed, hanging with ragged shreds. The fat in the recto-ischial fossæ of either side had been entirely destroyed, leaving a cavern which would readily receive the two fists of an ordinary-sized adult; the tuber ischii of

either side were exposed, but not denuded of their periosteum; just external to the tuber ischii of the left side, deep under the muscles, a sinus was discovered running in a curved direction 6 3-4 inches to a point just back of the scrotum, and, by elevating the limb, gave exit to about a wineglass of pure healthy pus. The upper border of the ulcer, which had been the commencing-point of all the difficulty, was thick, hard, and white; the lower and back portions between the incisions had sloughed away; the whole cavern was of a greenish black color, and excessively fetid; the walls of the abscess were from an inch to two inches in thickness.

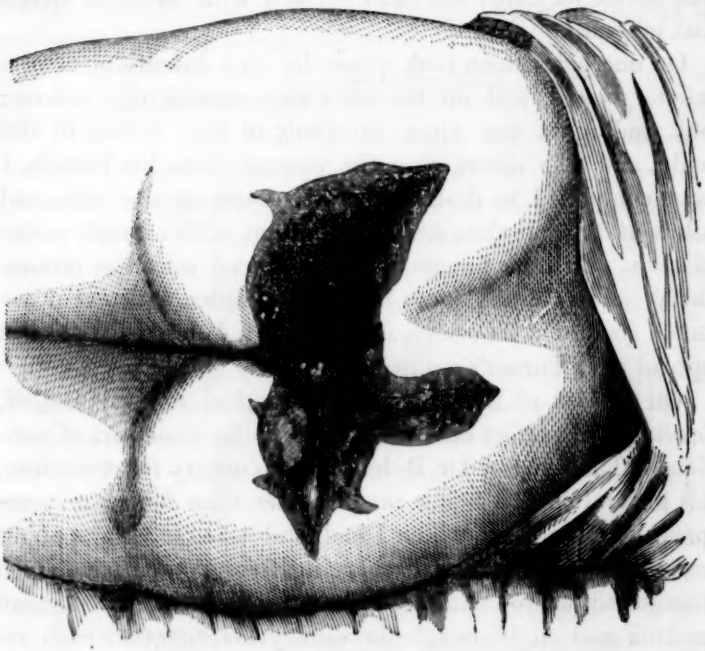
After washing out the intestine by an injection, the abscess was carefully injected with Labarraque's solution, and dressed with lint saturated with Le Doyen's disinfecting fluid and tinct. myrrh, and covered with a yeast poultice. The dressings were changed and the catheter introduced every six hours for the succeeding four days, after which he was enabled to evacuate his bladder without assistance.*

The discharge was very copious and offensive, and at each dressing a large amount of sloughing shreds were washed off by the injection. He was fed upon the most generous diet, and brandy and quinine were administered liberally. In about ten days from the operation, the wound had assumed a healthy aspect, and granulations were abundant, particularly from the deepest part of the abscess, around the edges of the ulcer, where the growth was so rapid as almost to assume a fungous appearance, and for some time I hesitated about the propriety of its removal, fearing that it might be malignant, as the patient had lost two sisters by cancerous disease.

But, by the advice of Dr. Dupierris, a distinguished and accomplished surgeon of Havana, I was induced to let it remain, as he stated that he believed, in so deep and large an

* From the 11th of August to the 15th the thermometer ranged unusually high, and on Sunday the 14th over 100 persons died from the effects of heat in this city and Brooklyn.

abscess, the central part would grow up more rapidly than the rest, and act as a sort of pillar or central brace to which the sides could be afterwards attached by paring the edges and bringing them together. This was a new idea to me, but I am frank to confess, from the result in this case, it seems to be practicable.



The above drawing, by Mr. Rennie, was made four weeks after the operation, when the wound was reduced more than one-third by the abundant granulations which were forming in it, and, with the exception of the deep and narrow sinus upon the left side, which extended down as far as the scrotum, everything was healthy; this was injected with iodine without any benefit, and I then wished to draw a lead seton through it, but was unable, as the probe came down against the ramus of the ischium and pubis. I there fore covered the probe about six inches, by melting upon it nitrate of silver, and then passed it into the sinus, and left

it until the caustic was dissolved. This fortunately excited a healthy inflammation and closed the sinus, and on the 1st of October, with the assistance of Dr. Thebaud, I pared off the edges of the wounds, and also the fungous central tumor of its mucous covering, and brought the edges together by two straight ordinary darning needles and a twisted suture, one needle on either side, and dressed with adhesive straps and pressure.

On one side union took place by first intention, of the whole wound, and on the other to a considerable extent; but finding it too close to admit of free flexion of the body, and also obstructing the passage from his bowels, I was compelled to destroy the adhesions on one side, and allow it to granulate from the bottom with a much wider cicatrix. A large bougie was introduced into the rectum daily, and retained some minutes in order to prevent too much closure of its orifice, and the wound dressed with lint spread with Turner's cerate.

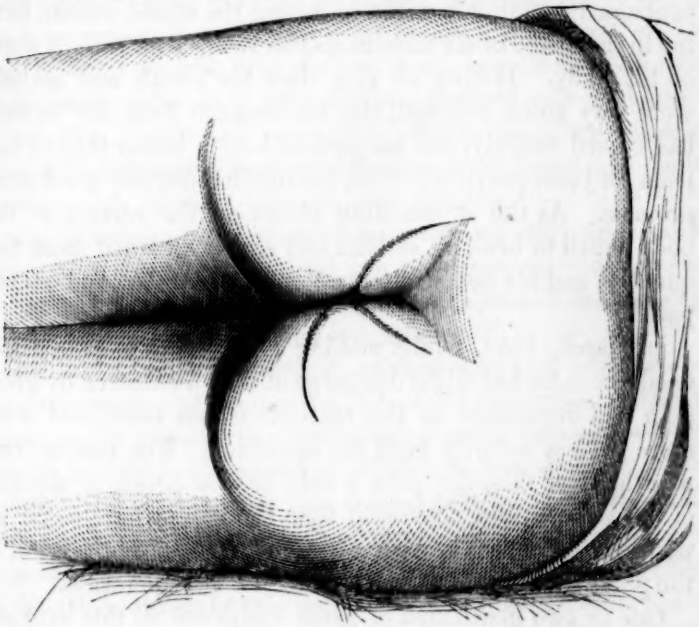
On the 1st of November the parts had entirely healed, leaving him perfect control of his anus by some sort of artificial sphincter, and Dr. B. left for the country for recreation, his general health being much better than for some years previous. An issue which I had established in his arm about six weeks previous was discharging freely, and I have given him directions to continue with it through life. Having had asthma and slight cough for some years, together with repeated hemorrhages from the bowels, and this being the third time he had been operated upon for fistula within ten years, and as nature seemed determined to have some drain, I therefore placed it in his arm.

The accompanying drawing represents the parts as healed.

As I intend making a few remarks on this truly formidable case, which, so far as I am able to ascertain, is by far the most extensive case of fæcal abscess on record, it seems necessary that I should give some history of its formation, and also the previous condition of the patient.

Dr. B. is a man of large muscular frame, and is of a nervo-

sanguineous temperament. He has been afflicted with severe attacks of asthma and some slight cough since the age of puberty, with almost weekly hemorrhages from the bowels. For many years he was a close student, and lived a very sedentary life, which induced severe and obstinate constipation, which eventually produced hemorrhoids, and finally a fistula, which continued open and discharging for some years, during which time his cough ceased and his attacks of asthma were not so frequent or severe.



In 1847 he was operated upon by a surgeon of this city, and the fistula partially healed; he still suffered great pain at stool, and there was constantly a discharge of pus and blood per anum.

I saw him first in September, 1850, and found a small fistulous opening in the left side of the anus, running close by the side of the intestine, and opening into it just above the superior sphincter. I laid it freely open, dividing the sphincter, cauterized the whole extent of the wound with

nitrate of silver, and succeeded in causing firm granulations and a cicatrix, from its deepest points of opening in the intestine, in about three weeks. Soon after this, while travelling in the northern part of this State, he had a very severe attack of asthma, almost threatening suffocation, which was followed by a cough, which has been more or less persistent until the spring of 1852, when he began to suffer from the common epidemic of carbuncles and furuncles which has been so prevalent in this region for the past two or three years. He continued suffering from these during the whole season, having in the space of six months no less than 47 on various parts of his body. During all this time his cough and asthma were very much relieved, the hemorrhage from his bowels had ceased entirely, and his general health better than it had been for years previous, which he considered a very good compromise. As the suppurating ulcers on the surface of the body began to heal, his asthma and cough returned more frequently, and his bowels became more irregular and constipated.

In March, 1853, whilst making great effort to pass hardened fæces, he had slight discharge of blood, followed by great pain and uneasiness in the rectum, which continued with more or less severity until the operation. For one or two months after this, the pain would be *most intense at the time* of the *passage*, but since that time the pain would come on with greater severity, with a sense of fulness and tension of the parts some three or four hours *after* the operation.

One or two gentlemen of great eminence in this city examined him at this time with the speculum, but detected nothing except a very firm contraction of the sphincter, and were disposed to regard it as a case of stricture—the ulcer not being detected, as it was situated below the superior border of the sphincter, instead of above it, which is by far the most common position. Dr. S. P. White, however, who examined it in May with his finger, stated that he felt what seemed to him to be the edges of an ulcer, but having no speculum he could not be positive; and it is highly probable

that the firm contraction of the sphincter was dependent upon the presence of this ulcer in the fibres of the muscle, acting as a source of irritation. From this time he fell into the hands of the Homœopathists, and the result has been detailed above.

Observations.—In the first place, we notice in this case an affection of the lungs of many years' standing, and a varicose condition of the hemorrhoidal veins, relieved by the establishment of a fistula, and by abscesses in various parts of the body, and aggravated by the arrest of these discharges; thus proving the necessity of establishing an issue in some part of the body, when we wish to heal a fistula in a constitution complicated with pulmonary difficulty or a hemorrhagic tendency.

2d. The position of the ulcer. It may be in the fibres of the sphincter and difficult to detect, and not invariably above the muscles, which is the common position.

3d. That after an abscess has been formed, the pain is much more severe some hours *after* the passage from the bowels, when gas has been formed from decomposition of the escaped fæces, than *at the time* of the operation.

4th. The immense collection of fæces and pus, with extensive destruction of the parts, and depth of the sinuses, without making any attempt to ulcerate towards the external world, which is the general tendency of all foreign bodies.

5th. The singular fact that the granulations from the bottom of the abscess were so much more abundant than at any other place, as to assume a fungous excrescence of two inches in length, and nearly two inches in circumference at its base, and eventually became attached to the surrounding walls and converted into healthy tissue.

6th. The wonderful recuperative powers of nature, that were enabled to repair such extensive destruction of parts, and the replacing of so useful and perfect an external sphincter.

ART. III.—*A Case of Sclerema, or Induration of the Cellular Tissue of an Infant; with Remarks.* (Read before the Society of Medical Inquiry.) By CHAS. D. SMITH, M. D., Surgeon to Bellevue Hospital, N. Y.

DURING the last year, I have had under charge the male infant of a lady of this city, with a swelling of one of his hands, which presented peculiarities not usually met with. The history of the case is as follows:

The child was born in the month of December, 1852, in every respect free from disease. Six weeks after birth, a swelling commenced on the dorsum of the right hand, and, gradually increasing for a period of six months, finally attained to three times the size of its natural dimensions, and then ceased. The tumefaction, extending from the second joint of fingers to about an inch and a half above the wrist, was convex in shape, and almost of the hardness of marble. The temperature was much below that of the surface of every other part of the body, and was generally whiter than the surrounding skin, although at times it would assume a dark red or purplish hue. The infant experienced no pain from it, using the hand as freely as the other; no impression could be made upon it by pressure, unless considerable force was used. The health of the child was unimpaired; every organ performed normally its functions, and there was no interruption whatever to his natural growth and thriving. He would occasionally have attacks of colic, which did not always immediately yield to treatment, yet they did not differ materially from the same complaint in other children. His sleep was natural, appetite good, and he was possessed of the ordinary intelligence of children of that age. Vaccination passed through its progress satisfactorily, and for the last two or three months dentition has gone on without affecting the system unpleasantly, showing that no constitutional cause existed.

The disease corresponds with what authors have described under the name of Sclerema,—induration of the cellular tissue, or skin-bound disease. The treatment which I

adopted was of no avail. It consisted of embrocations, unguents composed of iodine and mercury, vapor douches and the like.

Remarks.—In examining the different treatises on diseases of children, very little is found explaining in a satisfactory manner the true nature of this affection, or from which we can derive instruction of any great practical value. Its character, pathology, and treatment, are not understood, and there appears to be considerable diversity of opinion among writers in regard to it. The following is a *resumé* of the writings of medical men who have given this disease particular investigation, several of whom have had frequent opportunities of watching its progress in the hospitals for children in Paris.

The term "sclerema" has been employed to designate this disease; and by it, no doubt, is understood hardness or induration. Its locality is the areolar tissue, and may be general or confined to particular regions, as the face, neck or extremities. Infants are the usual subjects of it, although cases have occurred in children and adults.

Symptoms.—The disease usually shows itself from two to twelve days after birth, and is characterized by an engorgement, swelling, coldness, and rigidity of the part affected, resisting the impression of the fingers. Sometimes it manifests itself at the commencement of fever, or it may be preceded by it two or three days. The skin is smooth and shining, and appears stretched firmly over and bound down to the subjacent parts, and conveys to the touch the sensation of a frozen dead body. The color varies; it may be red, purple, a dirty-white, or yellow, like wax exposed to the air. The system, when the disease is extensive, is more or less affected. Swallowing becomes difficult, resulting frequently in trismus.

The infant does not nurse, utters constantly feeble and plaintive cries, and respiration becomes labored. This may continue some time, usually four or five days, and finally ends in death. M. Bouchut, formerly Interne of the Hô-

pital Necker, Paris, says: "Many children with this malady retain for a long time the power of motion, using freely their arms and legs; with others there is a stiffness of the whole body. When seated on the face there is usually great difficulty in opening the mouth, or moving the lips. The cutaneous sensibility is preserved throughout the whole body. They appear at times to suffer greatly, crying in a sharp, shrill, yet feeble tone, the peculiarity of which has attracted the attention of medical men, and has been compared by some to the crying of young mice. Cough does not always appear at the commencement of the disease, but it shows itself after a while, and accompanies it to its close. Respiration is ordinarily feeble and incomplete; in some cases, however, it is very rapid, and presents the characters of the hurried respiration of pneumonia.

Diagnosis.—The disease may be distinguished from ordinary œdema of adipose tissue by its hardness, and not yielding to pressure, by the suddenness of the attack, and the coldness of the part affected.

Elephantiasis, although attended with œdema and hardness, and occurring on the face and extremities, is generally developed in small tumors, varying in size, and is unlike sclerema, inasmuch as the skin in the former is uneven and wrinkled, while the latter is smooth and even.

According to some authors, it may be confounded with the adipose induration which occurs sometimes on the approach of death; but the history of the case will generally prevent confusion on this point.

It is often complicated with other affections, and the most frequent is icterus. It has also been associated with pulmonary congestion, lobular pneumonia, intestinal irritation, colic, and disease of the heart.

Causes.—M. Paletta, of Italy, in a paper read before the Institute of Milan, attributed the cause (in newborn infants) to incomplete respiration, from an insufficient development of caloric, producing torpor and coldness of the extremities, followed by induration of the cellular tissue.

He noticed they occurred more frequently during the spring and fall.* Other authors agree with him in attributing the cause to the same influence, opining that "the cold, interrupting the insensible perspiration, retards the circulation, and condenses the mucous and serous fluids in the tissues."

M. Billard, in his work, exhibits statistics to prove that cases are more often seen during the winter. M. Pastorelli, of the Foundling's, near Trento, Italy, observed it to be particularly prevalent in May and August.† Underwood, Denmard, Audrey, and Dugos, ascribed it to cold. M. Breschet, to an open state of the foramen ovale; and M. Denis, to an inflammatory affection of the cellular membrane. M. Barron, of the Hôpital des Enfants trouvés, considers it a simple infiltration of the cellular tissue, owing to derangement of either heart, lungs, or large vessels. Others, to an imperfectly developed state of the child, to a cachectic condition of the mother, or to premature birth.

Prognosis is only favorable when the disease is local, and unaccompanied with any organic affection.

Pathology.—It will be perceived that great difference of opinion exists with regard to this branch of the subject. There are some who regard induration of the cellular tissue as the original and primary disease; others, on the contrary, attribute it solely to some internal lesion. Post-mortem examinations have discovered a yellowish or greenish sero-albuminous fluid in the cells of the areolar tissue, and the hardness has been ascribed to the coagulable quality of this fluid, as well as the condensation of the fat, the result of mechanical pressure. Many regard sclerema as an affection of the skin; others think it answers in all respects to the characters of simple œdema. The skin and areolar tissue have been found quite dry, no fluid flowing from it when cut, but infiltrated with an exudation similar to the congealed fat of animals. The lesions which appear the most important are

* Archives Générales de Medecine, Vol. v.

† Dublin Quarterly Journal, Feb., 1853.

those which have been noticed in the internal organs, consisting of sanguineous engorgements of the lungs, brain, and liver, and a stasis of the blood throughout the whole venous system.

The methods of *treatment* suggested by writers do not vary materially. So much uncertainty still exists with regard to the true nature of the disease, so little understood is its pathology, that no rational plan has been proposed.

The indications are, 1st, to remove all internal congestion by suitable evacuants, followed by proper stimulation. 2d, to endeavor to soften the indurated parts, and bring back heat; this may be accomplished by exciting the skin with irritating frictions, thus restoring the capillary circulation, and promoting the absorption of the effused fluid. Leeches, blistering, unguents of iodine and mercury, have been employed, fomentations of emollient and tonic decoctions, such as bran and cinchona, have been advised, and in some instances have been of service. Scarifications, electricity, and bandaging, have their advocates, and are useful; but, on the whole, treatment in ordinary cases seems of no avail.

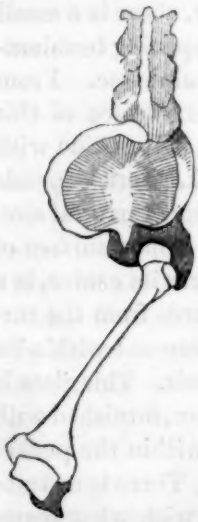
ART. IV.—*A Case of Congenital Malformation*, (with Illustrations.) By JOHN G. SEWALL, M. D., Physician to the Northwestern Dispensary, N. Y.

MRS. McD., born in Ireland, though a resident of the United States from infancy, 32 years of age, married at 19, always by report in good health, is the mother of seven children. All, previous to the subject of this paper, were large, healthy, and easily born. While last pregnant she reports herself unusually well. Labor, at full term, was tedious two days and nights by report, yet natural. The placenta was very small, delivered naturally. Says she never was off her knees since the quickening, and to this circumstance attributes the malformation. Was attended in her confinement, August 2d, by a female. Infant survived twenty minutes.

Post-mortem, *Aug.* 3*d.*—External conformation of head, trunk (as far as umbilicus), and upper extremities natural. From below umbilicus, there is a sudden narrowing of the abdomen, as if from a pressing together of the ossa innominata, presenting a sharp-feeling, curved projection at their pubic portion. Instead of the lower extremities, there is found, projecting from a point a little to the right of the median line, a stump four inches in length, curving upwards, like the arc of a bow, and inclining to the left. Its right outline is continuous with the curve of the right side of the body. Its left forms an obtuse angle with the left side of the body. Its extremity, not bifurcated, but pointed, presents no scar. On its upper side, three-fourths of an inch from its extremity, there is a small fistulous opening terminating in a cul de sac. From the upper surface of this stump, at its junction with the trunk, there depends the scrotum of natural size, upon the upper surface of which, near its centre, is a small pocket, whose opening, directed upwards from the surface, upon careful examination, is found to conceal within its fold what appears to be a miniature glans penis. This glans is about the size of a No. 3 shot, of a purplish color, furnished with a corona and a frænum, and is sheathed within the pocket like the natural glans within the prepuce. There is no trace of a meatus. This glans further connects with what seems to be a rounded cord simulating the corpora cavernosa. There is no trace whatever of an anus. About three inches from the root of the scrotum, at the median line of the back,

is a small nipple-like projection of skin. The cord is natural, and arises from about one and a half inches above symphisis pubis. Entire weight of body four pounds.

Dissection.—Brain not examined. Organs of chest natural and healthy. Liver of usual prominence, natural. Small intestines natural. Large intestine terminates at the left iliac region in a cul de sac of a pear shape, about the size and color of the adult gall bladder. It is contained within a fold of peritoneum which is loosely attached to the posterior wall of the abdomen. Otherwise, it floats freely in the cavity of the abdomen in an isolated state. Bloodvessels are distinctly seen to ramify on its surface through the peritoneum. The kidneys are of natural size, and in their natural situation, but entirely disorganized, containing within their capsules only a soft, pultaceous, homogeneous mass. There is no trace whatever of a bladder, and no ureters can be demonstrated. Within the scrotum was found one testicle; the other was still in the abdominal cavity. The stump above referred to, on close examination, proves to be the left thigh, though connected with that portion of the pelvis situated upon the right side of the body, its naturally posterior aspect presenting anteriorly. Its development appears to be perfect in form, though much below the normal size, it being but about three inches in length. The patella, with the ligamentum patellæ, occupy their normal situation, project pointedly upwards, and complete the lower extremity of the stump. The pelvis has undergone a marked arrest of development, especially in that portion represented by the right ilium, it being not more than one half the size of its fellow, both being far below the normal average. They are united by bony tissue, presenting one compact mass, whose entire width does not exceed one and one-half inches. There is



furthermore apparent a remarkable twisting of the ilia upon their own axes, by which the right one has come to occupy to a great degree the situation naturally belonging to the left. In this way is to be explained how the left thigh presents itself upon the right side of the body in a reverse position. The pointed crest in front of the ilia is evidently formed by the ischia and ossa pubis applied to each other in an imperfectly developed state.

Nothing definite as respects the sacrum and coccyx can be determined. These are, however, applied to the last two lumbar vertebrae, themselves in an imperfect state. Several small plates and prominences of bone irregularly disposed and closely compacted together, which probably represent their component parts in an arrest of development. With the exception of these irregularities the spinal column is in its natural condition.

The peculiar disposition of the parts above noticed, together with the absence of some of the viscera, and the arrest of development in others, may be explained on the supposition of violence done to the fœtus in an early stage, by which, a change in normal development being produced, an arrest of any subsequent evolution in the direction of the injury, as well as of the processes already established, is produced.

226 *West 30th-street.*

ART. V.—*On the Ultimate Cause of Malarial Diseases.* By J. R. BLACK, M. D., Ohio.

IT is a trite yet just observation that the road to truth is slow and laborious. This, the philosophic physician is free to confess, applies with peculiar emphasis to the science of medicine. True, there is not now, nor has there been, a lack

of discoveries to extend the boundaries of our knowledge; but, unfortunately, in very many instances, this knowledge is either so elementary or complicated as to be neither reliable nor satisfactory. Nor can this imperfect state be attributed to a want of patient and distinguished effort. The teeming medical press can testify to its abundance on the one hand, and a candid intelligence must award it a long list of profound and searching intellects on the other.

Inferior minds, who follow the beaten path of medical investigation, may strive in vain for an original thought. If they are desirous to add to the stock of ideas to discover truth, or a clue to it, they must leave this beaten path of medical inquiry pursued by a Sydenham, a Cullen, or a Rush. To follow up and endeavor to complete the peculiar views of such men, would only result in thinking what they have thought, or repeating what they have written. The true course to pursue (and the writer's aim) is not to provoke thought by a review of their opinions; but endeavor to trace nature in her varied workings on the animal economy.

For more than a century vigorous efforts have been made to arrive at definite conclusions on the subject of malaria. The main strength of the exertion has been to establish, by hypothetical reasoning and experiment, the existence of a specific poison. And, to judge from the diversity of views existing at the present day, we should say that success in this point is as far, if not farther distant than ever. Under such circumstances, any thought in a new vein of investigation may be looked to with peculiar interest, as tending either to retard or advance the efforts of the physician to master disease.

Malarious diseases (I use the word "malaria" in its popular or assumed sense) are observed to prevail under a variety of circumstances, but few of which are either constant or uniform. They do not seem to be proportionate to the amount of moisture in the air or earth, or to the quantity of vegetable matter in a state of decay. Were they dependent on

either of them, separate or combined, then experiment and observation might measure the amount and intensity of the effects in any specified locality; but the firm believer in the hypothesis of vegetable decomposition would never have foreseen the disastrous consequences which befel the British troops in Spain, during the peninsular war, nor the uncommon prevalence of intermittents in the auriferous regions of California. The valley of the Mississippi, compared with either of them in vegetable decomposition, and, on this hypothesis, must be pronounced totally uninhabitable. I cannot conceive it necessary that the opponents of this view should prove the entire absence of vegetable matter in the soil. It is sufficient to know that it is extremely limited, and that often, in localities where it is so, malarious diseases are more frequent than in others composed almost exclusively of vegetable matter.

To the opinion that the specific poison is transmitted by the winds, there are so many difficulties attached, as to render it of little or no value in explaining these discrepancies. Even admitting the assumption, it is wholly at fault with my personal experience in California. Arriving there on the 7th of June, I proceeded immediately to the mountains, and there remained until forced to return by a most obstinate intermittent. The last rains had occurred about the beginning of April, and, at the time of my arrival, every thing presented the evidences of excessive drought. The grass and herbage of all kinds were thoroughly dried, with the exception of that along the river-borders low in the valley. The rivers, until within fifty miles of my station, were pure, cold, and swift in their course. Nor did I ever observe a marsh or pool of water within the same distance. The air was clear, pure, and exhilarating, and the winds came with great regularity from the southeast in the day, and from the northwest in the night. It was not, however, until the months of August, September, and October, that the night winds became regular and strong. The sun had scarcely disappeared below the horizon, when the tall and

scattered pines began to wave in the wind. The defiles of the mountains for a time remained calm and serene, but before long the wind swept down the gorges, producing a very chilling sensation. The simple foliage of a tree was no longer either a safe or comfortable shelter for the miner, and the warmth of a fire became as grateful at night as the gentle cooling breeze from the south had been in the day. From April to November, there is a complete deprivation of any appreciable moisture—no rain, no dew, or fogs. To the medical topographist there is no feature of interest, with the exception of the great contrast between the temperature of the day and night. The habits of the miners are exceedingly simple, and they are not in general addicted to intoxicating drinks. While in the mountains, I, in common with many others who had never before suffered, was attacked with intermittent fever. From August to February of the year following, I was never free from it a week. Enlargement of the spleen, derangement of the liver and stomach supervened; and to such an extent as to compel me to abandon the country. Such a case does not form the exception but the rule. According to my observation, at least nine tenths of the diseases prevalent there are unequivocally of malarious origin. Dysentery is a very common disease, next in frequency, perhaps, to intermittent fever; and to show the intimate connection of these diseases, I may mention that I occasionally observed a most inveterate intermittent pass immediately into dysentery, the latter suddenly and permanently curing the former. Any attempt to trace these diseases to the decomposition of vegetable matter in that country must prove utterly abortive. On the one hand, there is the day wind from the wide Pacific; and, on the other, the night wind from the barren, snow-capped mountains. Besides, the unhealthy season occurs at the very period in which there is the least possible chance for vegetable decay. The months of August, September, and October are superlatively dry; but present, owing to the strong night winds, the most marked variations of temperature.

The facts adduced to controvert the hypothesis of decomposition are equally forcible against the doctrine of animalcular development. The advocates of this view closely associate vegetable growth or decay with the production of animalculæ, and whatever is conducive to the increase of the one, is also conducive to the increase of the other. It might be urged further, that the animalcular hypothesis fails to account, analogically or otherwise, for several peculiarities of the miasmatic poison. 1st. The remarkable exemption of cities, and the greater danger on the first than on the second floor of a house, receives from it no explanation. 2d. The animalculæ are said to be scattered or dissipated by the heat of the sun with day, and brought together in increased numbers and power by the shades of night. If this be so, why are not woods and shaded places more infested than the opposite? Analogical reasoning would lead to the prediction that those unknown forms of animated existence most active at night, would be the very ones most abundant and energetic in shaded situations, yet on this hypothesis we have an assumed exception of an assumed existence.

Moisture and heat combined cannot account for malarious diseases, for vessels cruising in the Gulf of Mexico, when the temperature of the air is high, and nearly saturated with vapor, are comparatively exempt. The same exemption obtains in low latitudes, however moist, provided the soil be covered with a dense foliage, or the surface with water.

Nor can heat alone account for malarious diseases, for in such a case they should advance with it *pari passu*. However, it is a well-established fact that the intensity of these diseases does increase with the temperature, and that below a certain range they cease entirely. Such an occurrence is sufficient evidence of a very intimate relation between them, and in view of this it will be well to review some of its most obvious effects on the organized world. It is doubtless true that this agent is entitled to the highest rank of vital stimulants. An illustration of this is seen in its vivifying influence on the vegetable world. The

slumber or death of winter is succeeded by new energy or life from a simple increase of temperature in the spring. A high degree of heat or caloric also accelerates the growth and maturity of plants, and, some say, of animals. Familiar instances of the power of heat, and of heat alone, as a vital stimulant, are found in the simple hatching of an egg; in the revival of consciousness and motion in hibernating animals; and the development of life in the countless sperms of animated existence. Now, in most of these examples, it does appear as if heat had more influence over their lives than over that of man; but the difference is more apparent than real. The amount of heat in vegetables and the lower animals is almost wholly due to external circumstances; but in man nature provides internally means to maintain a uniform temperature, in spite of outward circumstances. This wonderful provision, particularly in man, of preserving nearly or quite the same temperature, under the most extreme conditions of heat and cold, may be applied *a fortiori* to prove that it has more influence on life in him than on vegetables or the lower animals. Indeed, the range of temperature which the latter must necessarily undergo from adverse winds, and the change from day to night, would prove immediately fatal to the human body.

When a person is exposed to a high temperature the motion of the blood is increased, the skin acts with increased energy; in short, all the actions which the undue heat excites, tend in the end to the cooling of the body. So also cold, when applied continuously or vigorously, tends to excite those functions on which depends the heat of the body. But, in detail, there is this striking difference, that while heat applied to the body either gradually, powerfully, or moderately, excites immediate actions to preserve it from change, cold, when applied gradually and insidiously, excites no such actions. In cold bathing there is generally a perceptible and healthy reaction; but when cold is applied more gradually and continuously, as in sleeping on a damp bed, or on the bare earth and open air, there is no perceptible *normal* or

healthy reaction. The disorder or disease which almost invariably succeeds such imprudences, clearly demonstrates the potent influence of heat, and the disastrous consequences which its removal effects. In these examples it is reasonable to believe that the body, particularly if previously subjected to a high temperature, is unprepared to meet or withstand the drain upon its supply. This is borne out by the fact, that those who too suddenly remove the artificial means by which the bodily heat is preserved, are almost certain to suffer more or less ill consequences. Nature seems to speak by emphatic signs that she is not prepared to provide an immediate equivalent for the artificial means which habit has taught her to depend upon.

M. Chossat has also shown, in his experiment on animals, the power of heat on life. The true cause of death in inanition he attributes to a loss of the calorifying power. Birds, whose death seemed impending, "were almost uniformly restored from a state of insensibility, and a want of muscular power, by artificial heat. Their temperature rose, they flew about the room and took food when it was presented to them."*

Moreover, observation shows, that the portion of our species having the calorifying power in the least degree, suffer most in a variety of forms from the effects of cold. According to Copeland, more than one-half of the deaths and two-thirds of the diseases of children are caused more or less by it.

These statements lead to the conclusion that heat is among the most salutary agents on life—a point readily conceded by all; but, at the same time, it forms, according to various authors, the active cause of a variety of diseases, such as hepatic disorder, cutaneous irritation, and cerebral congestion. It is improbable that the law meets with an exception in this case. In our readiness to look to other causes of our afflictions than those for which we are individually re-

* Carpenter's Human Physiology, p. 685.

sponsible, we have laid these diseases almost solely to the change of nature; our own artificial habits, and perverse violations of nature's laws, are not taken into account. The constant effect in this age of steam is to subject the body to the greatest possible *variations* of temperature. If any physical exertion is to be performed, it is done with all possible haste, every muscle is strained, and then we fly to the coolest recesses of art to charm the body with the striking reverse of temperature. The amount of heat has but little to do with disease; it is the change which brings on the disastrous effects. Almost every case of diseased liver finds its origin in peculiar variations of temperature. If this organ be supplied with a due amount of healthy stimulus, its actions will correspond thereto. If suddenly called to perform a more active duty, it will, with care, soon become acclimated, but neither this nor any other organ ever becomes habituated to great and constant changes of function without disease, disorganization and death. Extremes in the moral world are sinful even in the most natural acts. The same is true, even more pointedly, in the physical. The great principle of moderation is the true source and secret of health in many who are very weakly constituted. But to investigate the effects of extremes, a knowledge of the comparative power of the agent is necessary. It has already been shown that heat is among the most powerful agents acting on the body. A full, cold drink of water, taken into the stomach when the body is fatigued and heated, often proves immediately fatal. Again, the sudden abstraction of heat from the lungs is the most potent and common cause of pneumonitis. The simple application of cold to, or more properly the abstraction of heat from, the feet will often check the menstrual discharge. In short, this same simple and sudden agent is acknowledged to be a fruitful source of disease. Nearly all the diseases, however, referred to this origin are those by which the effects are developed by a *sudden* cause. There is no account of this source producing disease by a periodical action. When it acts on a particular part of the body, or on

predisposed constitutions, it may produce diseases totally differing from each other; but, though they thus differ, no one disputes the exciting cause; it is the same nevertheless. The point we wish to prove is, that the abstraction of heat from the body at night forms the essential cause of malarious diseases. The power of the agent abstracted, and its immediately deleterious effects no one doubts; but, in applying this explanation, the preconceived notions of malaria clash severely with it. The ingenious, well-spun, and learned hypotheses are not to be overturned by so simple an explanation. But we ask an attentive consideration of this subject, for we regard it in application as presenting by far the most plausible theory or hypothesis yet advanced.

The power of heat as a vital stimulant being admitted prepares us to anticipate for the important effects which follow its removal, and also that these effects will be increased in proportion to the elevation of the cause. If the vital stimulant, caloric, be of a high range and long continued, then there will be a corresponding increase or intensity of effect, following its removal. In brief, and in accordance with a physiological law, the greater the stimulant, the greater the subsequent depression or reaction. Now, it is well known of malaria that it prevails very rarely under a summer temperature of 60°; and that, as advance is made towards the equator, this class of diseases assumes, *pari passu*, an intense and violent character.—Where the heat is moderate and barely able to produce the disease, the cases that occur are few and mild in their character, but in countries having a high irregular temperature the cases are of a rapid and malignant form. The cause is the same, though of so much greater intensity as to conceal in a great degree the resemblance of effects, similar in many respects to the development of a slight catarrh from a moderate degree of cold, and the development of pneumonitis or pleuritis from a high degree.

External heat, or caloric, is the essential agency; the higher the point to which it attains, the greater the sensi-

bility and power of effect on the body, consequent on its removal. Hence, where the temperature of summer ranges about 60°, with considerable irregularities, mild forms of malarious diseases may be anticipated; and where there is a much higher summer range, with great diurnal variations, more malignant forms of malarious diseases are sure to prevail.

The *causes* of diurnal changes of temperature, particularly in the night, are due chiefly to radiation of caloric from the earth, or to the presence of winds from colder regions. In the internal region of our continent, the former is the chief, if not the sole cause, while on the sea borders, and in the neighborhood of elevated mountains, the latter is more commonly, though often an associated cause with the former. Low, moist, and loamy situations favor in a most marked manner this nocturnal depression of temperature. In fact, all know that frost may be found in such places, while others, differently situated, are considerably above the freezing point. It is for this reason that in these localities dews and fogs are always more common and abundant than elsewhere; caloric is radiated with greater facility and rapidity, causing the air to be diminished in temperature, and its capacity for moisture considerably lowered. But these effects are not observed where there is a breeze to disturb this concentration of action. It is easy to see, with this theory before us, why undisturbed conditions of the atmosphere favor—in the language of standard authors—"the condensation" of the peculiar poison, malaria, and why malarious fevers are much more common in low and marshy countries than elsewhere.

Again, where the circumstances favoring nocturnal radiation are absent, but where a great nightly reduction of temperature ensues from northeast or other cold winds, the same injurious effects follow,—a striking instance of which has already been given in the climate of California.

But besides the greater activity of the cause of malarious fevers *at night*, we must also consider the condition of the

body being entirely passive during sleep; there is neither an active consciousness to a gradual abstraction of heat, nor a vigorous action in the renovating power. This view receives strength from the immunity obtained by an opposite condition of the system, as in the excitement following stimulating drinks, or the activity of the organic apparatus attendant on the digestion of food. Experience has also shown that soldiers and sailors passing from a cold country to a warmer receive great protection from flannel worn next the skin.

These general and simple reasons why the night time is particularly obnoxious to health, in malarious districts, contrasts strongly with the complicated and conflicting views of the advocates of the *peculiar poison* hypothesis, that the poison is evolved by the sun, but concentrates itself in certain spots at night; or the dews and fogs suspend, dissolve, or set free the mysterious agent, and give it entire and undiluted to the unsuspecting victim.

Allusion has already been made to the activity of malarious phenomena in certain localities; and, as this constitutes one of its most important features, a more extended notice will be warranted.

It may be stated, as a general rule, that land influences are the chief, if not the sole source of malarious fevers. Cases without number might be quoted of terrible devastations of the inhabitants of the land, while others on the water, not distant perhaps a score of miles, were enjoying good health. The intervention of a narrow stream between two localities has repeatedly been observed to separate health and disease; the most noxious effluvia of a certain spot has seemed incapable of surmounting so narrow a barrier. To suppose that the water *may* absorb the poison, is all well enough for those who believe that there *is* one to be absorbed. But to abandon such purely hypothetical views for a moment, it will be found that the effects of water compared with land are, that it moderates the heat of the day and lessens the coolness of the nights. The sea and land breezes sufficiently exemplify the general fact, together with the fogs that occur

along the course of our rivers; the last are chiefly observed when the air over the water is warmer by contact with it than that of the surrounding land; and the consequence is, that as the former air is chilled by the latter, it no longer has the same capacity for moisture, and water must of necessity be set free in the form of vapor or fog. In this way it will be perceived that the chilly air of the land is neutralized to a certain extent by the warm air of the water. The reason then why bodies of water afford protection from malarious diseases is, that they are not subject to any great change of temperature from the presence or absence of the sun; and when properly situated for those residing near an unhealthy tract of country, they must and will give decided protection. Water in any considerable body acts as a moderator of temperature by the disappearance of sensible caloric through evaporation during the day, and by the slowness of its cooling during the night, thus sustaining the temperature of the ambient air. Experiments to determine the difference of land and water in the cooling process, I have not met with, but the strength of the sea and land breezes in warm maritime countries, sufficiently demonstrates that it is very great.

Certain peculiarities of land affect very materially the range of temperature through the day and night. As has been stated, moisture in a soil favors the rapid radiation of heat; the same is true of the presence of vegetable matter. Davy found that a soil rich in this ingredient enabled it to attain a higher temperature from exposure to the sun, and a lower temperature when in the shade, than a chalk soil similarly exposed. In the former the range was even 30° more than in the latter. Considering that a soil rich in vegetable mould is generally fraught with moisture, there must be a much greater range of the thermometer in one place than another; common facts show that such is the case. The first frosts and the heavy dews are always observed in the sections having the greatest abundance of vegetable matter and moisture conjoined; so there also the first cases of mala-

rious diseases are observed to occur and continue with inexorable persistence. Their violence and malignance, however, generally depend upon the elevation of the temperature, and the length of time it continues. If the vital stimulation of heat be great and long continued, then may be expected disastrous results from its sudden fall, especially when the body is not in a condition to resist the drain upon its supply.

The physician of our rural districts must have observed, in his nocturnal rides, how much warmer the air is in a dense wood than over the open grounds. The absence of dew, as well as the indication of the thermometer, shows that the temperature does not suffer the same variations as in the open country. This is accounted for by the obstacle the sun's rays meet in reaching the earth, and the interception by the foliage of the radiation of caloric at night. The effect of course must be increased by the density of the foliage, and it must tend very materially to maintain an equilibrium between day and night. With this view before the mind, the reason why trees, and especially the pine, afford protection from malaria, is perfectly clear. A heavy vegetation will have the same preservative influence, though to a less degree, as the stratum of air between the foliage and ground is much smaller.

Another important point belonging to location is the distance of the body from the earth. Thus it has repeatedly been observed, that the lodgers on the first floor of a house suffered severely from fever, while those on the floors above entirely escaped. The explanation some of the specific-poison advocates give of this fact is, that it loves the ground. But in the theory here presented it is perfectly clear, that as the air is cooled at night chiefly by radiation, that stratum of air next to the earth must have its temperature most diminished. Experiments on this point have shown, that in the night time the temperature of the second floor of a house is from 6° to 12° higher than on the first floor. Again, it is a familiar fact that cities and towns of considerable size are

comparatively exempt from malarious fevers. In this instance there is but little moisture on the paved streets. The houses retain a portion of the heat of the day; and the warm air of rooms, as well as the numerous fires for culinary purposes, all tend to sustain the temperature during the night, and prevent that marked range of heat that would otherwise take place. Napoleon, in his celebrated campaigns, frequently resorted to artificial heat to protect his troops in some noted malarious district, with complete success.

By this theory of variations of temperature, the concentrated action of malarious fevers can be easily accounted for. If there is an extensive region, favorable to great nightly reduction of temperature of the air, then the winds may waft it some distance before its temperature is raised, and thus may make those suffer who apparently ought, according to received ideas, to suffer the least. But when the causes most favorable to reduction of temperature are confined to some particular spot, then are the effects entirely local and always expected. A very small extent of country may differ very much one year from another, in the circumstances favorable to these changes of temperature. Different winds during the day; a greater abundance of moisture in the soil, combined with undisturbed conditions of the atmosphere at night, will essentially influence the healthfulness of one district more than another in the same year. But a soil rich in vegetable matter, abounding in moisture, and situated in a region having a high summer temperature, with a still atmosphere at night, cannot be otherwise than unhealthy. Let the same region, however, be covered by a dense forest, and its unhealthy character will almost disappear; not because vegetable decomposition does not go on, nor because animalculæ are not developed, but because the forest moderates the heat of the day, and sustains the temperature of the night. In truth, it is a popular fact, that forests are more favorable to vegetable decomposition, and the development of animal life, than the open country of the same region.

Assuming the existence of a poison, whether gaseous or

animalcular, there is a great want of uniformity in its operation to the usual course of nature. Subject twenty men, for instance, of unequal constitutions, to the operation of a poison, either gaseous or animal, and it would be strange if *all* were not very sensibly affected by it. But in the operation of the poison—malaria—it is known that there are many who are proof against its effects. Such a discrepancy does not exist in the "temperature theory." There could be nothing more natural than that one person, from greater activity of the calorifying power, should escape unharmed, while another, differently constituted, should suffer in a most alarming manner. The question is more one of constitutional power than of ability to resist any aëriform poison.

It is said, according to Wood's *Practice of Medicine*, that in tropical latitudes the commencement of the rains is rather promotive of disease, partly, perhaps, by bringing down the miasmata from the upper air; partly by promoting "vegetable decomposition." This is scarcely consistent with a sentence or two preceding, in which the waters are said to dissolve the miasm *as it is generated*, and *prevent* its escape by *retaining* it in solution—hence the protection of floods. We will not discuss whether the poison might become exhausted after a few rains or not, but simply recall the fact, that nocturnal radiation is greatly promoted by a moist surface, and remark, that a large amount of caloric must become latent by the evaporation produced by rain falling on an arid and heated surface. This however soon ceases, and the body adapts itself to the change. But, on the reappearance of the summer season, the contrast of temperature between day and night, must be at its height. Hence it is, that at this time malarious diseases rage with great violence.

It is well known that the negro enjoys a freedom from malarious diseases, far beyond the white. This is observed in those who are born in our own latitude. It cannot therefore arise from acclimation. The theory here advocated affords a ready explanation of it. The organization and color of the skin "possesses a very considerable influence in coun-

teracting the heating effects of the sun's rays upon the body, and in carrying off the superabundant caloric."*

Ingenious opinions might be advanced in accordance with this theory of the periodicity which marks many forms of malarious fevers, but I withhold them and simply relate the instructive experiment of M. Brachet, who bathed "for seven successive nights, at midnight, in the river Saone, towards the close of October, when the water was cold. Retiring to bed after each bath, and covering himself warmly, he was affected by considerable reaction, which terminated in perspiration. At the end of the seventh day he omitted the practice, but was nevertheless nightly, about the same hour, attacked with a regular intermittent paroxysm, consisting of a cold, hot, and sweating stage, which returned for about a week, when it ceased spontaneously upon an occurrence which kept him out of his bed at that hour, which excited and warmed him."†

ART. VI.—*On the Saccharated Alcoholic Extract of Ipecacuanha.* By A. G. DUNN, late Apothecary to Kings County Hospital, L. I.

THE cephælis ipecacuanha, being a most efficient remedial agent, and at the same time a very safe and mild one, has been and is still most extensively used; but, owing to numerous adulterations, the dose is rendered quite uncertain, whether given in pill, powder, or otherwise. The tincture, wine and syrup, are likewise of unequal strength, being made after many different formulæ. The chief objection to the powder, however, is its absolute insolubility, thereby causing an unpleasant mixture when prescribed with liquids.

Taking into consideration these facts, and from reading in the *American Journal of Medical Sciences*, No. xlv. p. 229, an article on various saccharine forms of medicines, we were led to attempt the preparation of a *saccharated alcoholic extract of*

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* Copeland. † Wood.

ipecacuanha, which should be of uniform strength, perfectly soluble, and also agreeable to take. The following is the formula: ℞. Rad. ipecac. ʒiv, bruise to a coarse powder, and macerate for thirty days in fʒxvi of diluted alcohol, shaking it occasionally, then filter and express. The tincture thus formed is to be evaporated to ʒij, with which mix sacch. albi ʒviij, then triturate in a stone mortar until it is entirely dry.

The extract, as above prepared, has the peculiar odor and taste of ipecac.; it is of a brownish-yellow color, and is soluble in water, alcohol, ether, mucilage of acaciæ, &c.; in fact, in all the solutions with which ipecac. is usually combined. The dose required to be exhibited is the same as of the genuine powdered root.

From the more agreeable taste of this article, and its complete solubility in fluids, those physicians who have tried it have given it the decided preference over every other preparation of this valuable drug; and more especially in prescribing for children, for whom its sweet taste adapts it, as an excellent form for combination with other remedies, to be given in powders.

The success attending the administration of this extract, by the physicians of Kings County Hospital (in which institution it was first prepared and brought into notice), and others of the same profession in various parts of said county, has induced us to publish this paper, in order that physicians generally may have an opportunity of testing its great superiority over the common forms of ipecac. at present in use.

455 *Third Avenue, N. Y.*

ART. VII.—*Cases of Membranous Croup treated in the last Stage by the Introduction of Caustic into the Larynx and Trachea.* By EDWIN N. CHAPMAN, M. D., Brooklyn, N. Y.

CASE I.—I was called Feb. 25th, 1853, to the child of Mrs. B., No. 18, corner of Row and Furman sts., sick for three nights and two days with the croup, for which nothing

had been done, the parents supposing the child had merely a "bad cold." The child was a female, fat, and robust, and two years of age.

I found the following symptoms: Shrill croupy cough; aphonia nearly complete; high fever; inspiration long, difficult, and whistling. The air appeared to be drawn through a constricted aperture with considerable muscular effort. This obstruction was permanent, and had gradually augmented in intensity since the accession of the disease.

I directed three leeches to the top of the sternum. After which a teaspoonful of the following mixture every ten minutes, till vomiting followed. ℞. Tart. antim. gr. ij; syr. ipecac., syr. senegæ, āā ʒ ss. M. This mixture failed to produce any effect. I ordered a warm bath for one hour and teaspoonful doses of syr. senegæ every ten minutes whilst the child was in the bath. This failed also to vomit it.

In the afternoon three more leeches were applied, and the first prescription given to produce vomiting, but without effect. 6 o'clock, P. M.—Fever much reduced; voice suppressed; inspiration extremely difficult, and with great muscular effort. Ordered ℞. Tart. ant., gr. i; syr. ipecac. ʒ ss.; syr. senegæ, ʒij. M. To be given in one-half teaspoonful doses, every half hour. Also ℞. Hyd. sub. mur., gr. iv; cretæ, ppt. gr. viii; ft. chart. No. viij. One to be given every third hour.

Feb. 13, 8, *A. M.*—Mr. B. came in haste, and stated that the child was dying; it had turned black in the face, and could not recover its breath for some time, I found the child in the last, and usually fatal stage, death evidently not twelve hours distant; the child torpid; with difficulty aroused, and directing all its strength in drawing the air into the lungs. She had been in much the same condition the entire night. I saw that all hopes from ordinary treatment were over. I procured a solution of the nitrate of silver, gr. xxx to water ʒj, and introduced it into the larynx on a bit of sponge attached to a piece of whalebone. The sponge passed beyond the rima glottidis. From the spasm of the larynx it required some little effort to withdraw it. In the after-

noon the caustic was reapplied. The laryngeal symptoms were equally as grave as in the morning, but without any exacerbations. About 1 o'clock that night, the child was extremely restless and oppressed for breath, when after a fit of coughing a substance was heard to come up, which was swallowed, after which the child slept comparatively quiet for several hours.

Feb. 14*th*, 8, *A. M.*—Found the child slightly improved. Since the relief experienced at 1 o'clock, the oppression had returned, and the caustic was reapplied, the sponge readily penetrating within the larynx. A piece of membrane came away on the sponge, an inch and a half long by a quarter of an inch in width, and of the thickness of a sixpenny piece. From the irritation of the caustic the child began to vomit, which, being favored by salt and water, another piece of membrane, half the size of the first, was vomited, besides an innumerable number of shreds which were floating in a white glairy substance. This was the first appearance of mucus, which was now beginning to take the place of the plastic exudation. The child was much relieved and continued to breathe with less stridula for some hours. In the evening the symptoms were again aggravated; applied a caustic solution, ℥j to ʒij; vomited the child; mucus very tenacious, and adhesion was discharged.

Feb. 15*th*.—The child passed a more comfortable night with similar symptoms, but mitigated; applied caustic, gr. xv to ʒj; vomited the child, when it brought up a membrane two inches and a half in length; one half of which was flat, the other a solid cylinder, evidently from the bronchial tubes. From this time the membrane disappeared from the matters vomited; its place was supplied by mucus.

I am firmly convinced that the entire mucous membrane, as far as the bronchial tubes, was coated with this false membrane, when I first commenced the application of the caustic. The membrane, doubtless, has a pseudo-vitality; adheres strongly, and is nourished by the inflamed vessels of the mucous membrane. The caustic destroys this pseudo-vital-

ity; removes the inflammation of the mucous membrane. The attachment of the false membrane being destroyed, it is coughed up as easily almost as mucus. The child gradually but perfectly recovered.

CASE II.—*Feb.* 1*st*, 1851. A child of Mr. O., Prospect-street, lately recovered from bronchitis, was attacked with croup. During the first two nights, the emetics operated with relief to the patient; on the third night they produced no effect; applied caustic as in the first case. No membrane was seen, as no steps were taken to make the child vomit after commencing the caustic. The child recovered completely from all affection of the respiratory organs; but directly as the croup began to disappear, the sublingual glands inflamed and suppurated, which so impeded deglutition, that little or no nourishment was taken. Two weeks after, all croupy symptoms had disappeared, and the child died of marasmus.

CASE III.—*Aug.*, 1853. Boy, Sackell-street, 6 years of age, had croup of 36 hours' duration; emetics operated, but produced no discharge of mucus or mitigation of symptoms. Applied caustic as before—cured.

CASE IV.—*Oct.*, 1853. Child, Smith-street, 16 months of age, had croup of 48 hours' duration. Emetics failed to operate. Applied caustic as usual. On the third day of my attendance, all croupy symptoms had disappeared; I thought recovery sure. On the fourth day, on going to see my patient, I found it breathing with great rapidity, evidently from trouble in the bronchial tubes, which was doubtless from the exudation of false membrane. The child died in the evening. No post mortem allowed.

CASE V.—*Nov.*, 1853. Child, Carroll-street, 18 months of age, croup of three nights and two days' standing; nothing had been done. This case was almost in every respect identical with that of the child of Mr. B. The treatment was the same, the probang being introduced some four inches into the trachea. False membrane was brought up on the sponge, and in the matters vomited. The child recovered perfectly.

I have thus enumerated five cases; embracing all the cases in which I have used caustic in that state, in which trachcotomy is usually considered the only resort; four of these recovered from the croup, and the fifth died from trouble in the bronchial tubes, probably the exudation of false membrane.

Art. VIII.—*On the Effects of the Milk of the Menstruating Nurse upon the Nursing Child.* By Stephen Smith, M. D.

Case.—Child, four months old. when first attacked with convulsions was well formed, very active and sprightly, in good flesh, and had never suffered from any illness whatever. The father was a stout, healthy man; but the mother was in delicate health, and decidedly phthisical: tuberculous deposits could be detected at the apex of the right lung, and she had frequently expectorated blood.

When first called to the child, it had just recovered from a fit, and to all appearance was perfectly well. I could discover, on the most careful examination, no cause whatever existing in the infant for the sudden and unexpected attack of convulsions from which it was then recovering. I then directed my attention to the mother, but could not learn that she was, or had recently been, suffering any impairment of her general health, or that she had been eating any improper food. At a loss to account for the cause of the child's difficulty, I directed it to be taken from the breast for the present, and prescribed a simple corrective of the bowels. It had several slight attacks during the next twenty-four hours, after which they ceased entirely, and the child was again put to the breast. I saw it several times during the next two or three weeks, and always found it in a good condition.

One month, however, from the first attack, I was again called to see the child, which I found just recovering from a severe convulsion. On examining its condition attentively, and although the fits were more serious than before, I failed to find any reliable cause in the child itself, and charged the mother again with being the cause of her child's sufferings. She denied, however, being in the least indisposed; and the child was once more removed from the breast, and simple remedies prescribed. The severity of the fits at once diminished, and in thirty-six hours they ceased to recur. I advised that she should nurse the child no longer, but procure a wet-nurse, or rear it by hand. Contrary to this advice, after a short interval, she again applied it to her own breast. I saw it

a week or more after its recovery, and found it apparently quite well though not as vigorous as after the previous attack.

About a month after the second attack, I was a third time summoned to visit the child. The convulsions were evidently much more severe than at any previous period; and as they had already continued nearly twelve hours, it was apparent that they would speedily prove fatal. Its general condition still continued good, although, in the interval since its last attack, it had not recovered the lost ground. The usual remedies in such cases were resorted to, but with only temporary relief. It died about twenty-four hours after the onset of the convulsions.

In conversation with the mother, she stated, that since her attention had been called to the fact that some change had taken place in the condition of her system, by which her milk had become injurious to the child, she recollected that the first attack of convulsions came on while she was menstruating for the first time after her confinement, and nearly at the close of the period. Her menstruation was always very painful, and often menorrhagic. The second attack occurred about the middle of the next period, and the third set in when she felt the first slight pains which always preceded for some time the catamenial flow.

Remarks.—There is a difference of opinion among writers as to the influence of menstruation upon the milk of the nurse. Rosen remarks that he has distinctly observed that infants, who nurse during the menstrual period, are more or less unwell. Mauriceau says, a good nurse should not have her menses. Bègin has seen a case where the milk changed its appearance, and the child became sick. Chailly advises that the nurse should not menstruate, on account of the unhealthy influence exerted upon the milk, from which the child suffers colics, &c. Many other writers might be referred to, expressing in a general way the same opinion.

On the contrary, practitioners, placed under the most favorable circumstances for correct observation, deny that menstruation exerts any peculiar influence upon the milk of the nurse. Guillot, although he advises that the menstruating nurse should be rejected, adds, that of the 25 nurses engaged in the Foundling Hospital, Paris, he has known several having their menses at the same time, but the infants in their charge did not suffer. Joux (*Schmidt's Jahrbücher*) denies positively that the milk of the menstruating nurse has any injurious effect whatever upon the child, and appeals to an experience of twenty years in proof of his assertion.

But popular prejudice, whether formed from observation or otherwise, has long since established the rule, that a good nurse does not

menstruate, or at least that the child should not take the breast during this period. So prevalent is this opinion, that the nurses making application for a situation in the Foundling Hospital, Paris, carefully conceal the fact that their menses have returned. It may therefore be considered a well-settled fact that menstruation does exert some deleterious influence upon the milk of the nurse, rendering it for the time unfit for the child.

But observation here detects the existence of a noxious property in the food of the infant, which both chemistry and the microscope have as yet failed to demonstrate. Bègin, as already stated, has noticed a change in the sensible properties of the milk of the menstruating nurse, and the child fell sick. Donnè, in his *Treatise upon the Microscope*, remarks that he has examined the milk of a nurse while menstruating, but was unable to detect any appreciable modification. In one instance he found some granular bodies. The most recent examination of this subject is by MM. Vernois and Becquerel, whose investigations are contained in a small volume* recently published, and from which the opinions of different authors, as above quoted, are principally obtained. They analyzed the milk of nurses at three different periods: 1, in the interval of menstruation; 2, on the approach of the menses; and 3, during the catamenial flow. The following table gives the result:

	Interval of Menses.	Return of Menses.	Actual Presence.	Normal State.
Density	1032,24	1031,94	1031,48	1032,67
Weight of Water	889,51	886,44	881,42	889,08
" Solid Matters	110,49	113,56	118,58	110,92
" Sugar	43,88	41,68	40,49	43,64
" Casein & extractive matters	38,69	43,58	47,49	39,24
" Butter	26,54	26,98	29,15	26,66
" Salts by incineration . .	1.38	1,32	1,45	1,38

The authors call attention to the remarkable fact of the comparative regularity of the modifications, whether more or less, at these several periods, as exhibited in the table. Thus:

The *density*, being nearly normal during the interval, diminishes progressively with the approach and return of the flow.

The *weight of water* diminishes in a more marked yet regular manner, in the same order, from the interval to the actual existence of the catamenial flow.

*Du Lait chez la Femme dans l'Etat de Santé et dans l'Etat de Maladie, &c. Paris, 1853.

The *weight of the solids* increase, in an inverse manner,—a fact deserving of attention, as it contradicts the opinions of authors.

The *sugar* diminishes progressively.

The *casein*, on the contrary, increases markedly.

The *butter* also increases, but in a more limited degree.

The *salts* diminish on the approach, but rise again, and exceed the normal amount on the return of the flow.

As the greatest change occurs at the period of the actual existence of the menstrual flow, the authors have given, in the following table, the average of the analysis of the milk of three nurses, in the two most distant periods:

	Interval of Menstruation. Average.	Presence of Menses. Average.
Density	1032,24	1031,58
Weight of Water	889,51	881,44
" Solid matters . .	110,49	118,56
" Sugar	43,88	40,49
" Casein and extractives	38,69	47,49
" Butter	26,54	29,15
" Salts by incineration	1,38	1,45

According to this table, the composition of the milk during the catamenial flow is modified as follows:

Density	diminished.
Weight of Water . .	sensibly diminished.
" Solid matters .	markedly increased.
" Sugar . .	slightly diminished.
" Casein . .	greatly increased.
" Butter . .	increased.
" Salts by incineration .	slightly increased.

The important question recurs, are these modifications of the milk of such a nature as to cause the effects observed upon nursing infants? MM. Vernois and Becquerel think that they might in an infant whose digestive organs were very delicate and susceptible to impressions; still they believe that these changes only render the milk less easy of digestion, and give rise to some accidental derangement of the functions of the intestines; and that is all.

To avoid such injurious effects, they advise that the child be allowed the breast less often, and be supplied with some sweetened water, to make up the deficiencies existing in the milk at this period. They conclude that there is only an accidental loss of proportion in the natural elements of the milk, without the introduction of any peculiar body of an injurious nature.

In a discussion which followed the reading of this paper, M. Roger

stated (*Med.-Chir. Review*) that he had paid considerable attention to this subject while attached to the office of nurses, and had arrived at the following conclusions: "If the menses reappear easily, without pain or derangement of the nurse's health, while her milk is under 12 or 15 months, and the quantity of blood lost is normal and moderate, the quantity of milk does not become diminished, nor its qualities altered, and the child does not suffer from its use. If, however, the menses are too abundant or too frequent, the milk may diminish in quantity, or disappear. The same effect is also produced, though more slowly, in some days or weeks, when the menses are prolonged for a week, so that the loss is considerable. The milk will much more certainly dry up if the menses reappear at an advanced period of lactation; this being then the signal of the imperfection and approaching termination of the secretion. When the milk becomes thus diminished, it rarely exhibits the physical characters of poor milk; but by its density, whiteness, and the excess in number and size of its globules, it more approaches in character and richness cow's milk. When the menstrual epochs reappear with difficulty, and are attended with pain, indigestion, diarrhœa, &c., or are preceded or followed by leucorrhœa, the child may suffer symptoms due to indigestion, induced by the altered characters of the milk; the alteration of the milk chiefly consisting in increase in the number and size of the globules. These influences are, however, only temporary, and the milk soon recovers its normal character. The ailments which the child hence suffers are only temporary, and have been greatly exaggerated."

It is not difficult to perceive the bearing which these observations have upon the explanation of the case above related. The menstruation of the mother had always been irregular, being painful and often menorrhagic. On the occurrence of the first menstrual period subsequent to her confinement, and when at that period of the actual flow in which the greatest change in the quality of the milk takes place, the child, though entirely healthy, yet possessed of a nervous system like its mother, very susceptible to impressions, whether external or internal, after a day or two of indigestion, suddenly falls into convulsions. On being taken from the breast it gradually recovers, but not completely. One month after, it suffers a more severe attack of convulsions, the first of which occurred soon after the catamenial flow had commenced. Again taken from the breast, it recovered, but evidently was not as vigorous as before. Three months after the first attack, and when seven months old, it experienced a return of convulsions on the first accession of the pain preceding the catamenia, which speedily proved fatal.

ART. IX.—*A Contribution to our Knowledge of Poisoning by Aconite.* (Read before the Society of Statistical Medicine, New-York.) By GEORGE H. TUCKER, M.D., late Assistant Physician to Kings Co. Hospital, L. I.

CASES of poisoning by aconite, as compared with other substances of the narcotico-acrid class, are of somewhat rare occurrence; nevertheless, we meet with them sufficiently often to render an accurate knowledge of the peculiar effects produced by this article, of considerable importance in a practical point of view. This infrequency may perhaps be accounted for by the fact, that its very deleterious properties are almost unknown among the laity. In proof of this, we find that in nearly every instance it has been administered or taken by mistake.

My attention has been more particularly called to the subject of poisoning by this drug, from a case having recently come under my own observation, which is given in the accompanying tables, and from the slight mention made of it by systematic writers. I was therefore led to collect as many cases of this kind as were to be found recorded in such books and periodicals as were accessible. The results of my researches are arranged in tabular form, this being much more convenient for reference, as well as deduction.

ISOLATED cases reported in the journals, and brief notices in the various works on poisons and medical jurisprudence, constitute, for the most part, the literature of poisoning by aconite. The only monograph on aconite, as far as I am aware, is that written by Dr. Fleming, of Edinburgh, and published in 1845. Although this work has justly been regarded as authority on the medicinal and toxicological properties of the various species of this plant, yet it by no means enters so fully into the latter as to leave unsettled very many important questions of a medical as well as medico-legal nature. We do not claim, however, in the accompanying tables to supply this desideratum, but only to contribute to this end a collection of facts heretofore widely scattered, and consequently little available, with such deductions as naturally follow their examination.

ACONITE, as a poison, seems to have been known to the ancients, as it is supposed to have been mentioned by Theophrastus, and also by Ovid and Pliny. It was at that time considered the most virulent of all poisons, and was used as a State poison in the execution of criminals condemned to death. A species of it has long been known to

the Chinese as a poison. It is a native of most parts of Europe, growing both in mountainous regions and on the plains. It is also indigenous in this State,* and is cultivated in gardens as an ornamental plant.

Species of the Plant.—Numerous species of the genus aconitum are described by botanists, the principal of which are the A. napellus, A. ferox, A. neomontanum, A. cammarum, A. lycoctonum, and A. anthora; the first mentioned is generally recognized as the officinal. Dr. Fleming considers it and the A. ferox as the only ones possessing any very active properties; the others, no doubt, possess similar qualities, though in a less degree.

Active Principle.—The powers of this plant are due to the presence of a vegetable alkaloid, named *aconitina*, "which is a white pulverulent substance; it is fusible, not volatile, soluble in alcohol and ether, but scarcely so in water, even when the temperature is raised to the boiling point."† It is destitute of smell, and has a bitter and acrid taste; this acrid taste, however, says Prof. J. B. Beck,‡ "does not belong to the aconitine, inasmuch as it can be separated from it by combining the base repeatedly with acids, and decomposing the salts thus formed."

Tests.—Chemistry thus far has not furnished us with any very reliable tests for this most subtle poison. On this point, Dr. Christison§ observes, "that if any of the suspected matter be obtained in a pure state, its best characteristic is its remarkable taste," to which he has found nothing exactly similar in the numerous trials he has made with other narcotico-acrid plants. Dr. Taylor remarks that nitric acid dissolves it, but the solution is colorless; when sulphuric acid is used no color is given when cold, but a dark brown tint is evolved when heat is applied. All the solutions of aconitine are precipitated by potash, and all its salts are excessively bitter.

Officinal Forms.—These are the common and saturated tinctures, and the extract. The formula of the common tincture is given in the U. S. Pharmacopœia, thus: ℞. Aconiti ℥iv, spts. vini rect. dilut. Oij, macerate for fourteen days, express and filter. The tincture recommended by Dr. Fleming is prepared as follows: ℞. Rad. aconiti napell.

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* Prof. CHAS. A. LEE on Medicinal Plants of the State of New-York. *New-York Jour. of Medicine*, vol. IX.

† Taylor on Poisons.

‡ Lect. on Mat. Med. and Therapeut., p. 147.

§ Christison on Poisons, 3d Edin. Ed., p. 877.

ʒxvi, acohol fʒxvi; macerate for four days, then pack in a percolator and add alcohol until fʒxxiv are obtained. The leaves, seeds, and root, were formerly the parts used by pharmaceutists in preparing the above forms; the root, however, is now preferred, as it is supposed to contain a larger proportion of the active principle, and as being more uniform in strength.

The following analysis of the tabulated cases presents, as accurately as the meagerness of the records will admit, the results of our examination of the subject of poisoning by this plant:

Sex and Age.—Although the sex is not essential in arriving at any useful deductions, yet as it is given in many of the cases, it should not be omitted in these general conclusions. In the majority of cases males were the victims, being nearly 2 1-2 to 1; in males, also, the symptoms were often more violent, and the proportion of deaths to recoveries much greater than in females, being in the proportion of 3 1-2 to 1. It is difficult to account for this fact, as in nearly an equal number of females the dose was as large, and in many where recovery took place even larger, than that taken by males. It cannot at least be explained by a mere difference of sex.

From the too frequent omission of the reporters of cases to record the age of each patient, we shall be able to classify them only as children and adults; of these, the large majority very naturally occurred in adults, owing to the circumstances under which instances of poisoning usually take place, as in eating the leaves of the plant as a salad, and especially in making use of the preparations of the drug as a remedy. In children it occasionally happens that the tincture is given by mistake, as in case 41, which came under my own observation; and also case 49; much more often, however, children have been poisoned by plucking the leaves or flowers, or by chewing the root.

Quantity and Kind taken.—In the majority of instances poisoning was produced by eating the leaves as a salad; this is generally owing to its being gathered by mistake. In one case (14), a female, for the purpose of destroying her husband, purposely boiled the leaves with her greens, of which he ate and was fatally poisoned; a friend happening in, partook of the remainder, and suffered severely, but finally recovered. In another instance (19) a lad died from the effects of eating some of the leaves which had been given him for parsley. An infant ate the leaves and flowers, and died with tetanic convulsions in two and a quarter hours. The quantity of the different preparations taken is very various, depending entirely upon circumstances, while the effects are equally various, depending wholly upon the real strength of the

preparation taken. In this latter respect the marked looseness observed by writers in noting accurately the preparation used, whether the common, or saturated tincture, or the infusion, that it is quite impossible to arrive at anything like accuracy as to the actual amount of the poisonous principle of the drug taken in each individual instance. This will account for the great discrepancy observed in regard to the fatality of different doses; for instance, one man took twenty-five minims of the tincture with twenty minims of the tincture of belladonna, and one dram of the tincture of musk (case 40), and died with symptoms of poisoning by aconite; another swallowed an ounce and a half of the tincture prepared according to the Parisian codex, and survived. This difference observed in the effects of the various, and often of the same preparation, may be farther explained by the fact stated by Pereira, that the aconitina is so strongly retained in the vegetable tissues after their compression, that a variable quantity of the alkaloid is obtained in the same process. In but one instance was the aconitina taken (37); in this case two and a half grains were swallowed by mistake; and, although not seen by the physician until eight hours subsequently, the patient recovered. He manifested symptoms of hydrophobia, and suffered a complete collapse. A remarkable instance of administering the fresh juice in a hospital to twelve patients (cases 23 to 34 inclusive) afflicted with scorbutis, by mistake for cochlearia, is recorded by Ballardini. Each patient took about two and a half ounces of the juice; nine recovered and three died. The symptoms were very nearly alike in all; two old women, both of whom died, suffered convulsions, and finally paralysis.

Symptoms.—The earliest symptoms occur from the local effect of the poison, viz., tingling, pricking, burning or benumbing sensation in the lips, tongue, and mouth; this often extends immediately to the extremities, and is felt in the skin in different parts of the body, and also along the œsophagus and in the stomach. In case 13 this order seems to have been reversed, the first symptoms commencing in the extremities, and subsequently extending to the tongue and mouth.

Vomiting generally succeeds to the burning in the throat and stomach; it is usually violent, but more often diminishes in severity after the free expulsion of the contents of the stomach, unless promoted by emetics; it may, however, persist until death, and be spasmodic in its character. Vomiting may be absent, and even nausea, in fatal cases; but more often recovery takes place in such instances. This difference of effects upon the stomach seems to depend upon the quantity and form of the preparation taken; where a large quantity of the

tincture was swallowed, the vomiting was violent, and continued, probably, from its local irritant effect; but in other instances, when taken in small and repeated doses (case 46), its first action seems to have been upon the nervous system, causing great prostration, with no symptoms referable to the stomach. The matters ejected are noticed as being green, livid, and bilious; in no instance was stercoraceous vomiting observed. Dr. Fleming denies that aconite is an irritant poison; but, from the promptness with which vomiting follows the introduction of the alkaloid (case 37) into the stomach, and the congested state of the mucous membrane often found after death in fatal cases of poisoning, we should be disposed to favor its irritant action.

Purging is a common symptom, often severe, and attended with violent, colicky pains, tenderness of the epigastrium and belly, and sense of distension of the abdomen. In some instances purging was probably due to the remedies employed, but in others it seems to have followed as the direct effect of the poison. Occasionally a diarrhœa set in, with painful sensations of the bowels.

Nervous System.—Among the early symptoms are those due to the action of the poison on the nervous system; these are tingling in various parts of the body, loss of sensation, tremors, cramps, great muscular debility, prostration, restlessness, sense of swelling of tongue, and constriction of œsophagus, hurried and laborious respiration, and, progressively, convulsions, tetanic and hydrophobic symptoms, &c. In several cases it resulted in general paralysis, and in one in paralysis of the lower extremities. Dr. Christison was led by experiments to conclude "that the symptoms depend in a great measure on gradually increasing paralysis of the muscles, which terminates in immobility of the chest and diaphragm, and consequent asphyxia." This analysis would seem to sustain this opinion. The intellect was generally clear, occasionally vivid; delirium was seldom present, and then noticed as merely incoherent. In two cases (1, 42), however, the patients were described as furious and mad. Orfila regards monkshood as acting peculiarly upon the brain, causing delirium; in this opinion he is not sustained by statistics.

Circulatory System.—The pulse is generally frequent, weak, and often imperceptible when noticed; in a very few cases it was slow and irregular. The impulse of the heart is noticed in several cases as having been weak and fluttering.

Pupil.—The action of aconite was observed in 17 out of 20 cases to cause dilation of the pupil. That this appearance was due to the effects of the poison we must infer from the fact, that it was among

the earliest symptoms noticed. This is contrary to the views of the best authorities. Dimness of vision was occasionally remarked.

Treatment.—Where the patient was seen early, emetics of zinc, ipecacuanha, tartar emetic, &c., were usually administered, with demulcent drinks. These remedies are, as in all cases of poisoning with drugs, of great service in the early stage. The subsequent treatment has usually been stimulants, such as ammonia, alcoholic drinks, artificial heat, sinapisms, &c., owing to the great tendency to collapse. The results of this course have been usually successful, and it must be regarded as the rational method of treatment in the absence of any antidote. Among the departures from this practice, we may notice the internal use of iodine—case 35; but although the patient recovered, it was probably due to the free use of emetics, followed by stimulants in a later stage. In case 37, the patient could not swallow, owing to hydrophobic symptoms, and anodynes and nourishment were accordingly administered by the rectum, with a favorable result. In one case, a strong infusion of huaco (*Eupatorium huaco*) was administered, which allayed the vomiting, when reaction came on, and the patient recovered.

Results.—In the plurality of instances, poisoning by aconite does not prove fatal. In the fatal cases, death may take place in an hour or be delayed till the sixth day; in the great majority of cases, however, the poison proves fatal within three hours from the time that it was taken.

Post-mortem Appearances.—Of the 25 fatal cases, the results of autopsical examinations, are given in only 11. Of these, general venous congestion was most commonly present. In 5 cases the vessels of the brain were found gorged with dark blood; in all in which the juice was taken, the pia mater was noticed to be highly injected with a great amount of serous effusion under the arachnoid, and at the base of the brain, but none in the ventricles. The lungs were generally congested, and, in cases 2, 3, and 4, they are recorded as being dense, hard, and engorged. The heart is noticed in but one case, and in this the cavities of the right side were filled with dark blood, corresponding with the same condition of the lungs. The mucous membrane of the stomach is generally congested, either universally, or, which is much more often, in patches, the degree varying from mere points to a high inflammatory blush, or even a brown color. It is occasionally found empty, and in 3 cases it was distended with gas. The small intestines were observed to be in the same condition as the stomach when noted. The color is not mentioned. The rectum was found intensely injected in 3 cases, in all of which a similar condition of the œsophagus was observed.

Sex.	Age.	Quantity and kind taken.	Symptoms.
M. 1.	Ad.	Ate some fresh leaves in a salad.	Reported as dying mad.
2. 3. 4. 5. 6.		Tincture of the root.	Burning from throat to stomach; colic; tenderness of belly; sense of swelling of tongue and face; vomiting and purging.
7. M. M. 8.	Ad. Ad.	ʒiij of root given each for capital punishment.	Experienced most violent pains.
M. 9.	Ad.	Do.	In a few hours became an idiot; face covered with cold sweat; total loss of sensation; spasms; syncope; involuntary stools; spasms; vomiting of livid matter; body swelled.
M. 10.	Ad.	Do.	
M. 11.	Ad.	Ate of fresh leaves in a salad.	Immediately felt burning heat in tongue and gums, and soon after in whole body, accompanied with twitchings. Two hours after, eyes and jaws fixed; extremities and forehead bathed in cold sweat; no pulse perceptible; respiration short.
F. 12.	Ad.	Ate small portion of root.	Slight vomiting came on shortly after eating, with severe pain in abdomen.
F. 13.	Ad.	Mouthful of tincture of the root.	In five minutes, prickling and tingling in arms and fingers; painful sensations across wrists; then in tongue and mouth; then in legs and feet; in less than ten minutes, face and throat felt swollen; nausea and retchings; legs failed; almost blind; conscious; eyes fixed and protruded; trunk and extremities cold; wrists pulseless; pupils contracted; countenance livid; jaws and fauces rigid; resp. short, imperfect, and labored; heart fluttered feebly.
M. 14.	40	Ate the fresh plant boiled in greens.	Vomited first the leaves eaten, then bilious matter; face alternately pale and red; tingling of flesh and tongue; restlessness; purging; occasional incoherence; lockjaw; frothing at mouth and nose; clenched hands.

Progress and Treatment.	Result.	Post-mortem Appearances.	Authorities.
	Died in a short time.		MR. WILLIS. *Med.-Chir. Rev.* July, 1837.
	Died in 2 hours. Died in 2 hours. Died in 2 hours. Recovered. Recovered.	Stomach and small bowels very red; gullet and rectum red; lungs dense, hard and gorged; cerebral vessels turgid.	M. PALLAS. *Christison*, 4th Edin. ed., p. 875.
Appropriate means were used.	Recovered. Recovered		MATTHIOLUS. *Beck's Med. Jurisp.*, 1838. Vol. 2, p. 636.
Became apoplectic.	Died.		Ibid.
	Died.		Ibid.
One pint of ol. olivæ and infus. card. benedicti given, which induced emesis; also, ammonia carb., and again vomiting ensued, with purging; pulse interrupted and irregular.	Gradually recovered.		MR. BACON. *Philos. Trans.* Vol. 38, p. 287.
Emetics and stomach pump.	Died in 3 hours.		DR. TAYLOR. *Med. Jurisp.* Am. ed. 1853, p. 163.
An emetic was administered, which produced vomiting; convulsions at each attempt to swallow; five hours after taking poison, pulse 58, full and intermitted; pupils larger.	Recovered.		MR. SHERWEN. *London Lancet*, March 25, 1837, p. 13.
Not seen by a medical man; no treatment.	Died in 3 hours.	24 hours after death: abdomen swollen; stomach empty and covered with yellowish gray mucus; irregular brown patches in mucous membrane of stomach. No other parts examined.	DR. GEOGEGHAN. *Dublin Jour. of Medicine.* July 1, 1841, p. 403.

Sex.	Age.	Quantity and kind taken.	Symptoms.
M. 15.	Ad.	Ate small portion of the above (case 14).	Two minutes after, prickling, numbness, and burning heat in mouth, throat, and stomach; copious flow of saliva; surface cold and sweating; burning in gullet and stomach; face felt swollen; no sense of constriction about the neck; restlessness; vision dim; stupor and insensibility.
M. 16.	57.	All ate of the roots in a salad; the man eating one and a half roots, the woman half a root.	Soon after eating: burning and numbness of lips, mouth and throat; violent and constant vomiting; extremities cold; chest warm; head cold and sweating; eyes glaring; violent pains in head; excessive trembling; lips blue; mind not disordered; not delirious or sleepy.
F. 17.	57.		Tingling and numbness of lips, mouth and throat to stomach; violent vomiting; numbness of extremities; lost power of articulation; great muscular debility; unable to stand or walk; stiffness of limbs.
F. 18.	5.		Similarly affected, but more slightly, except evinced slight tendency to sleep; like the other two, it was constantly putting its hands to its throat.
M. 19.	14.	Ate leaves in mistake for parsley, (prob. A. neomontanum.)	Two hours after: burning and tingling in mouth, throat, and stomach; very sick, and soon after had a fit.
20.	Ad.	Five grains of fresh extract.	Quarter hour after: tremors in muscles of thighs and arms; prickling in various parts; great irritation in throat, followed by severe vomiting; convulsions; during their accession became unconscious; when they ceased, speech was restored, but sight confused; surface cold and sweating; pulse slow and irregular; respiration short and hurried; beat of heart interrupted.
21.	Ad.	Do.	Do.
22.	Ad.	Do.	Do.

Progress and Treatment.	Result.	Post-mortem Appearances.	Authorities.
One hour after: hands and jaws clenched; speechless and frothing at mouth and nose. At midnight: purging and vomiting; cramps; tenderness of epigastrium; syncope.	Able to be about in 3 days, and perfectly recovered in five weeks.		DR. GEOGHEGAN.
Quite conscious till 2 minutes before death; no cramps, spasms, or convulsions; very weak, but no loss of control over voluntary muscles; able to walk; emetics given; ol. ricini, pedeluvia, rum and water; vomited more or less till ½ hr. of death, (probably owing some to emetic.)	Died in a fainting state after a stool.		DR. PAREIRA. *Mat. Med.*, 3d Am. ed. 1854, Vol. 2, p. 1088.
No cramps, spasms, or convulsions; sight dim; hearing unaffected; very giddy; face and throat insensible to touch; no delirium or sleepiness; most part conscious: body and extremities cold. Treatment as above; reaction in five hours.	Recovered.		DR. PAREIRA.
Treatment same.	Recovered.		DR. PAREIRA.
His mother gave him a glass of whisky; no other treatment.	Died in 7 hours by asphyxia	Vessels of brain enormously distended with dark fluid blood; stomach empty, with deep inflammatory blush over whole internal surface; a few patches of darker color also noticed. No further examination.	MR. RAMSAY. *Northern Jour. of Med.*, June, 1844.
Heat and sinapisms to extremities; counter irritation to spine and precordial region; ammonia in strong decoction of huaco.	Died in 3 hours.		M. M. PAREYRA. and PERRIN. *Buchner's Report, für die Pharm.*, No. 68, p. 199; and *Med-Chir. Rev.*, Oct. 1839, p. 544.
Same treatment.	Recovered.		Ibid.
Do.	Recovered.		Ibid.

Sex.	Age.	Quantity and kind taken.	Symptoms.
23.	Ad.	Each took about two ounces and six drachms of fresh juice in mistake for cochlearia.	Restlessness; great prostration of physical and mental energies; face pale and expression altered; pupils dilated; distressing headache and vertigo; pain and tension in abdomen; vomited green matter; in a fever; diarrhœa; anxiety and oppression at chest; trunk and extremities cold; livid color of nails; cramps in legs; pulse small, feeble, and often imperceptible.
24.	Ad.		
25.	Ad.		
26.	Ad.		
27.	Ad.		
28.	Ad.		
29.	Ad.		
30.	Ad.		
31.	Ad.		
M. 32.	60.	Do.	Similar symptoms, with dyspnœa, vomiting, and greater anxiety.
F. 33.	55.	Do.	Were convulsed; great prostration of strength; and at length paralytic.
F. 34.	55.	Do.	Do.
M. 35.	Ad.	Took 40 grains (f℥iss) of tinct., prepared of equal parts of plant and alcohol, infused for three months.	Immediately: burning and sense of constriction in throat and along œsophagus; restless; intellect entire; lower limbs in constant motion; in 2 hrs. convulsions; lower limbs drawn backwards; thumb thrown in palm of hand; face cold and sweating; eyes turned up; nearly pulseless; convulsions lasting 3 minutes, when they ceased; the senses were entire except he was totally blind.
M. 36.	39.	Six fresh plants cut up and boiled in half pint beer to ¼; half of this he swallowed.	One hour after: found quite insensible; pupils widely dilated; lower extremities paralyzed; pulse scarcely perceptible; great nausea; foaming at mouth; throwing arms about.
M. 37.		Ate of the root by mistake for horseradish.	Soon felt tingling of lips, extending round neck; dimness of vision.

Progress and Treatment.	Result.	Post-mortem Appearances.	Authorities.
Emetics; stimulants inwardly, and warm spirituous embrocations to surface.	All recovered.		M. BALLARDINI. *Annali Univers. di Med.* 1840, Tom. 3, p. 635; and *Med-Chir. Rev.* April, 1841, p. 499.
Do.	Death in a few hours.	Vessels of pia mater highly injected; serous effusion under arachnoid and at base of brain; no effusion in ventricles; lungs congested; stomach distended with gas, and containing some gray-colored liquid; patches of vascular injection in stomach and small intestines; liver and spleen healthy.	M. BALLARDINI.
Do.	Died in 2 hours.	Same lesions observed.	M. BALLARDINI.
Do.	Died in 2 hours.	Do.	M. BALLARDINI.
Fifteen centigrammes of tart. emetic with ipecac; this produced vomiting; in 2 hours, another emetic given; frequent convulsions; shiverings; head thrown strongly backwards; resp. stertorous; intellect unimpaired; sinapisms used and solut. idodini given; stimuli.	In 3 days was able to leave his room.		M. DEVAY. *Lond. and Edin. Monthly Jour.*, April, 1844, p. 356, quoted from *Canstatt's Jahresbericht.*
A teaspoonful of brandy given; this revived him; then stomach-pump applied.	Died while using the pump.	48 hours after death: liver, kidneys, and spleen distended with dark blood; veins generally congested; stomach presented red blush near cardiac extremity; bowels filled with air; pelvic viscera healthy.	MR. SAYLE. *Med. Times*, Oct. 18, 1854, p. 70.
Brandy; mustard emetic.	Died.		*Med. Times and Gazette*, Nov. 19, 1853.

Sex.	Age.	Quantity and kind taken.	Symptoms.
M. 38.	Ad.	Two and half grs. Aconitina.	Early and copious vomiting 8 hrs. after; collapse; surface cold and sweating; face pale; pulse hardly felt; pupils acting to light; no paralysis of sensation or motion; intellect perfect and even vivid; repeated violent spasmodic vomiting; hydrophobic symptoms when attempting to swallow.
F. 39.	27.	Fifteen minims of strong tinct. of root.	Immediately: numbness in tongue; dysphagia; convulsive twitchings of facial muscles; inability to walk; complete unconsciousness for 2 hours; pupils slightly contracted; symptoms paroxysmal.
F. 40.	25.	Tablespoonful of saturated tincture.	One hour after: pupils dilated, though sensible to light; pulse frequent, soft and weak, occasionally nearly imperceptible; sense of fulness in limbs; numbness, and prickling in tongue, throat, and over general surface; no nausea; head clear.
M. 41.	Ad.	Took draught containing Tr. Aconiti ♏xxv, Tr. Belladon. ♏xx, Tr. Musk ʒj.	Walked a mile after taking it; tingling of hands and feet, which were benumbed and powerless; in 1½ hrs. vomited freely; speech thick; staggered, as if drunk; no stupor or loss of consciousness; 2 hrs. after taking dose, weakness in arms and legs; no peculiarity in state of pupils; pulse 110; face pale.
M. 42.	16.	Nearly teaspoonful of saturated tincture.	Soon after, tingling, &c., in lips, tongue, extending to throat; syncope soon followed by copious vomiting; restlessness; spasmodic contractions and relaxations of muscles of upper and lower extremities; surface cold and sweating.
M. 43.	Ad.	One ounce of tincture of root.	Sense of burning in throat and stomach; inexpressible anguish; vomiting and purging; tenderness of epigastrium; colic; afterwards delirium, manifested by loud cries and running about in a violent manner.
M. 44.	Ad.	Do.	Soon began to stagger; then was seized with violent vomiting, purging, and acute colic pains.

Progress and Treatment.	Result.	Post-mortem Appearances.	Authorities.
Hot bath; sinapisms; enema of ol. terebinth; pulse feeble; dysphagia; enemata of beef tea and tinct. opii.	Recovered.		DR. G. BIRD. *Lond. Med. Gazette*, June 6, 1848, p. 30.
Internal and external stimuli used freely; next day had numbness in both arms.	Recovered in 24 hours.		DR. TOPHAM. *London Lancet*, July 19, 1851, p. 56.
An emetic of zinci sulph. and ipecac., by which Oj of thick fluid was ejected; in 1¼ hrs. pulse 120, feeble and irreg. in force; 3 hrs. after, no dil. of pupil, but numbness and tingling remained.	Next day perfectly well.		DR. MACREADY. *Am. Jour. Med. Sciences*, Jan., 1852, p. 268.
An emetic given; alcoholic stimuli; vomited again; convulsive movements; face more deadly pale; cold and clammy perspiration.	Died in 3 hours.	Veins of brain much congested; serous effusion in great quantity under arachnoid; lungs gorged with dark blood; right cavities of heart filled with the same; mucous membrane of stomach of dark red color; other viscera healthy.	DR. EASTON. *Glasgow Med. Journal*, July, 1853, p. 189.
In 1 hr. great prostration of strength, pulse 120, very feeble; countenance pale; pupils much dilated; slight headache; consciousness perfect, but mind occasionally wandered; resp. short and labored; gave brandy, carb. ammonia, &c., sinapisms and artificial heat.	Recovered in 8 hours.		DR. TUCKER. March, 1852.
Emetics and emollient drinks.	Recovered in 2 days.		M. DEGLAND. *Jour. de Chemie Méd.*, tom. 3, p. 344, quoted in *Am. Jour. Med. Science*, April, 1827, p. 471.
Do.	Died in 2 hours.	Only appearances of note, were great redness of mucous membrane of stomach and small intestines.	M. DEGLAND.

Sex.	Age.	Quantity and kind taken.	Symptoms.
F. 45.	Ad.	One ounce of tinct. of root.	Sense of swelling and burning in tongue, extending along œsophagus to stomach; soon after, shivering, swelling of face, vomiting, purging, and violent colic.
46.	Infant.	Ate leaves and flowers of the plant.	Shortly after began to stagger, as if tipsy; then pain in abdomen.
M. 47.	66.	Eighty drops of tincture of root in ten doses over a period of four days; largest dose at one time ten drops.	After using the drug four days, was found with extremities cold; skin cold and sweating; pulse 130, quick and feeble; cramps in legs, and spasmodic pains in abdomen; head somewhat confused; slight diarrhœa for few days previously.
M. 48.	56.	Ate of root.	
M. 49.	7.	Do.	
M. 50.	14.	Tablespoonful of tincture of root.	In 5 minutes, uneasy sensation in abdomen; in 20 minutes face pale; pulse 80, regular and full; pupils slightly dilated; intellect clear, and remained so till death; muscular movements impaired; head felt heavy and full; sight and hearing unaffected; frequent retching; no vomiting until after emetic; at first copious, afterwards frequent and violent, but became gradually less; pain in œsophagus and stomach; first after vomiting, great prostration.
F. 51.	Ad.	Tablespoonful of saturated tincture.	[Had been using the tincture externally for a few days previously for neuralgia.]
52. F.	Ad.	Teaspoonful of saturated tincture.	15 minutes, retching and burning pain in stomach; some hours, vomited freely after an emetic; skin cold; pulse 100, feeble and regular; spasms of of fingers; frequent convulsions; mind clear all through.
F. 53.	Ad.	3j Fleming's tincture.	

Progress and Treatment.	Result.	Post-mortem Appearances.	Authorities.
Emetics and emollient drinks.	Died in 2½ hours in state of great agitation.	Only apperances of note were great redness of mucous membrane of stomach and small intestines.	M. DEGLAND.
In 2 hours an emetic given; immediately the eyes became convulsed; trismus; trunk bent rigidly backwards; limbs convulsed.	Death ensued in 2¼ hours.		*Jour. de Chem. Méd.*, 1840, p. 94, quoted by *Christison*, 4th Edin. ed., p. 875.
Mild aperients; camphor; ammonia; next day torpid, and could scarcely be roused; intellect very clear; no paralysis.	Died in 6 days from first dose.	24 hours after death: blood unusually fluid; no other morbid appearances.	*Prov. Med. and Surg. Jour.*, Aug. 20, 1845, p. 535.
Had convulsions previous to death.	Died in 1¼ hours.		DR. GEOGHEGAN. *Dublin Jour. of Med.*, July 1, 1851, p. 409.
	Died in 2 hours.		Idem.
Zinci sulph. 3j; ice water douche to head; sinapisms, &c.; pulse 45 and regular; extremities cold; vision very dim; jactitation; no numbness except in head; used stimuli; reaction; in 1½ hours again collapsed; rigidity of muscles of back and neck.	Died in 2 hours.	No autopsy made.	DR. GRAY. *N. Y. Jour. of Medicine.* Nov., 1848, p. 336.
	Death rapidly ensued.		DR. HARTSHORNE. *Taylor's Med. Jurisp.*, 1853, p. 163.
Ipecac.; frictions to surface; sinapisms, &c.; stimuli; 3 hours after, pain in throat and thorax; constant retching; resp. irregular and spasmodic; pulse 120, feeble and intermittent; pupils dilated; tr. opii often repeated; after this, rapid recovery.	Next day well.		DR. PUTMAN. *Am. Jour. Med. Sci.*, July, 1853, p. 69.
	Died in 5 hours.		*Med. Times and Gaz.*, Jan. 1853.

The following is an analytical summary of the fifty-three cases of poisoning by aconite, reported in the preceding table:

Sex.—Males, 24; females, 12; sex not given, 17.

Age.—Adults, 47; children, 6.

Quantity and Kind Taken.—ʒiij of root taken by 4, all males, of whom 2 recovered and 2 died; root in substance, one and a half, 1, a male, died; half a root, 1, a female, recovered; very small piece of root, 2, both females, 1 recovered, 1 died; root, quantity not given, 3, both males, died; leaves, quantity not mentioned, 6, all males, 3 recovered, 3 died; leaves and flowers, 1, an infant, died; fʒijss of fresh juice, 12, recovered 9, and 1 male and 2 females died; tablespoonful of saturated tincture, 2, both females, 1 recovered, 1 died; tablespoonful of tincture of root, 1, a male, died; mouthful of tincture, 1, a female, recovered; ♏xv of strong tincture, 1, a female, recovered; fʒiss of tincture (Parisian Codex), 1, a male, recovered; fʒj of tincture of root, 3, males 2—recovered 1—died 1, female 1, died; ♏xxv of tincture ♏xx of tincture belladonna, and fʒj tincture of musk, 1, a male, died; teaspoonful of saturated tincture, 2, both recovered; tincture of root, dose not specified, 5, recovered 2, died 3; fʒij of decoction, 1, a male, died; grs. v of fresh extract, 3, recovered 2, died 1; grs. ijss of aconitina, 1, a male, recovered; gtt. lxxx of tincture, in ten doses, 1, a male, died, ʒi Flem's tr. 1, died.

Symptoms.—Appeared immediately in 3, all recovered; shortly after in 10, 5 recovered, 5 died; in quarter hour, 4, 3 recovered, 1 died; in two hours after, in 1, died; no time given in 34; tingling, prickling or burning sensation occurred in 24; not mentioned in 27; vomiting in 38; early in 20; not until emetics were given in 5; no emesis except produced by emetics, 8; vomiting violent in 11; copious in 4; slight in 1; matters ejected were green, livid, and bilious, in 13; no nausea in 1; diarrhœa in a few, purging in 12; pupils dilated in 18—early in 15, late in 3, contracted in 2, both early; natural in 1, its condition not stated in 31; restlessness in 16; surface cold and sweating in 30; respiration short, hurried and labored in 20, stertorous in 1, not noticed in 31; severe pains in abdomen, 19; copious flow of saliva in 1; dysphagia in 3; inability to walk in 3, vision dim in 5, totally blind in 1, almost blind in 1; intellect entire in 12, stupor or unconsciousness in 5, not mentioned in 35; paralysis in 3; no paralysis of sensation or motion in 1, others not stated; idiotic, 1; apoplectic, 1; speechless, 1; difficulty of articulation, 1; speech thick, 1; staggering in 2; convulsions general in 7; trismus in 4; twitchings of facial muscles, 1; excessive

trembling in 1; tremors in 3; cramps in 14; shivering in 2; great weakness in 15; headache and vertigo, 14—slight in 1, violent in 13; delirium in 4, slight in 2, violent in 2; occasional incoherence in 2; no delirium or sleepiness in 2; others not noted; pulse frequent, weak, and often imperceptible in 16, slow and irregular in 4, not mentioned in 32; lips blue in 2; countenance livid in 1; nails livid in 12; foaming at mouth in 2; sense of swelling of tongue or face, 13; of limbs, 1; hands clenched 2; syncope in 3; tenderness of epigastrium in 7; eyes glaring and protruded, 1, fixed in 1.

Result.—Recovered, 27; males, 9; females, 6; sex not given, 12. Died, 25; males, 14; females, 5; sex not stated, 5;—of these there died in one and a quarter hours, 1, a male; in two and a quarter hours, 1; in two and a half hours, 1, a female; in two hours, 8—males, 2, females, 2—sex not given, 4; in three hours, 4, males, 2, females, 1; no sex given, 1; in seven hours, 1, a male; in six days, 1, a male; in a short time, 2—1 male, 1 female; in a few hours, 1, a male; no time specified, 4, all males, five hours, 1, female.

Post-mortem appearances.—Lungs congested in 7; vessels of brain gorged in 5; mucous membrane of stomach red in 6; patches of darker color on its surface in 5; intestines injected in patches or otherwise in 6; rectum and œsophagus very red in 3; vessels of pia mater highly injected in 3; serous effusion under arachnoid in 4; at base of brain in 3; abdomen swollen in 2; bowels filled with air in 2; stomach empty in 2; containing gray-colored liquid in very small quantity in 3; filled with gas in 3; right side of heart filled with dark blood in 1; liver, spleen, and kidneys engorged in 1; healthy in 1; blood unusually fluid in 1.

ART. X.—*On the probable Cause of the Bruit, heard over the Heart in Acute Rheumatism.* By EZRA P. BENNETT, M. D., Ct.

I AM led from close and repeated observation to believe that in cases of acute rheumatism, the heart is not as often or as seriously implicated as many practitioners of the present day are inclined to believe. It is a fact not to be denied, that in a great majority of the cases of acute rheumatism, a bruit, more or less distinct, is plainly and distinctly to be heard. The question is, What produces it? It is generally conceded, I believe, that it depends upon some structural change in the valves, either thickening of the valves from inflammation or fibrinous deposits upon their free surfaces. That such causes of endocardial

murmurs do often exist is but too true. But that they always exist where these sounds are heard, or that they are the only cause of such sounds, I do most strenuously deny. In fact I do not believe that in the great majority of these cases there is any structural change in the valves whatever, or any deposits upon their surfaces. I believe the sounds in most of these cases depend entirely upon a change in the circulating fluid itself. We all know that in acute rheumatism, more than in any other disease, the plasticity and density of the blood is increased by the increased quantity of fibrin which it contains. Now this increased density and plasticity of the circulatory fluid must of course produce a decidedly increased friction upon the endocardial surface, and upon the valves, and in this way produce this endocardial murmur, in the same manner that an effusion of lymph, between the pericardium and the surface of the heart, produces the friction sound which we so plainly hear in pericarditis. Both these sounds, in my opinion, are produced in the same way, that is, by friction; one upon the internal surface of the heart, the other on the external. I have been led to adopt these views, in the first place, from noticing the little disturbance which takes place in the circulating system, during the existence of these complaints; and, secondly, from observing how quickly these sounds disappear, when the inflammatory state of the system is subdued, and the blood defibrinated, by proper remedies, which could not possibly be the case if these lesions actually existed. We know that a change of consistency in the circulating fluid does produce anæmic murmurs without any structural changes. Then why not in other diseases? The change in the blood in anæmia, though not identical with that in rheumatism, is, after all, analogous. In one fibrin is actually increased, in the other relatively so. In both cases the blood is more plastic, and the friction greater, and therefore both states of the blood are capable of producing endocardial friction sounds. My object, in this short communication, is to call attention to this view, which others may perhaps already entertain.

PART SECOND.

CRITICAL ANALYSIS.

ART. XI.—*Transactions of the American Medical Association*, Vol. VI., Philadelphia, 1853. 8vo, pp. 869.

THE TRANSACTIONS of our great national Association augment in interest and value each year. The present volume yields abundant proof of the fact that medical observation and research have been prosecuted with as much vigor and ability during the past as during any former year of our Society's history. It is a professional document of which every American physician may be proud; and we are gratified to learn from two or three sources that this annual issue is becoming better and more generally appreciated, as evidenced by an increased effort on the part of members and of Societies represented in the Association to secure for it a wider distribution.

The first article which we are led to notice is the Address of the retiring President, Dr. Beverly R. Wellford, of Virginia.

He, in the first place, notices the origin of the Association, the necessity for its formation and the objects aimed at in it, and then alludes to the proposed modification in the plan of organization, and urges "great caution in the introduction of material changes."

After alluding to the influence of the Association in exciting Federal and State Legislatures to healthy action on the subject of vital statistics, and of the importation of spurious drugs and medicines, and the direct good yielded to its members by its published transactions, he thus eloquently notices the charge made by some that the Association has as yet accomplished nothing, and has even injured the profession in the estimation of the public by exposing its errors:

Is it also nothing, by unaided, intrinsic moral power, to have bound in one code of medical ethics thousands of men in every section of this wide Union—each one free to act according to his own individual views, but yielding them in cheerful obedience to the

opinions of the Association, with as much deference and submission as if it were armed with the power and the terrors of penal law? Is it nothing, unendowed with compulsory authority of legal enactment or the seductive influence of the mileage and per-diem pay, annually to convoke such an assembly as I now have the honor to address? Such a congress, of such materials, and under such circumstances, presents a spectacle of moral beauty to which the opponents of medical reform cannot be insensible. It must command their respect and admiration, even if it fail to secure their coöperation. I know not, gentlemen, what may be the effect on others of an occasion like this; but, for my single self, when I thus recognize the denizen of the city and the forest—him of the frozen North and of the sunny South—him of the mountains, the rivers, and the prairies of the West, with him from the borders of the broad Atlantic, bringing their various opinions and prejudices, and casting them together as a sacrificial offering on the altar of science and professional patrotism,—when I see them animated by the same honorable and lofty impulse, and in fraternal harmony uniting their efforts to attain the same grand results,—I feel an honest pride in my profession and my country, and an abiding confidence that to such sons the high destinies of both may be safely entrusted.

Some plans for professional improvement and benefit are then indicated, and the Address closes with an eloquent tribute to the memory of Drake and Horner.

Report of the Committee on Medical Education.—This is, in the main, an excellent and able report; yet a few of its conclusions are to be taken with some grains of allowance. After giving a résumé of the opinions of former committees who have reported on the subject, the Chairman, Dr. Z. Pitcher, who is the author of the Report, proceeds to speak of the influence of the Association in elevating the standard of office and college education, and particularly enters into the desired improvements in medical colleges. He is a strong advocate (as by his relations to the University of Michigan we should expect him to be) of "free colleges for the preparatory and professional education of young men." He illustrates the feasibility of the project by giving a synopsis of the organization of the University of Michigan. Of the main features of that plan we approve. We demur strongly, however, to one inducement, which it is proposed to offer to students, and that is, the deduction of one year from the term of medical study of all students who first graduate in the department of the Arts.

It is true that those who have acquired the mental discipline, afforded by the literary course, may be able to receive and digest as much medical knowledge in two years as the undisciplined could in three; yet it must be conceded, by every reflecting member of our

profession, that, even with a good preliminary education, and a diligent pursuit of medical study for three years, the student graduates with only a general comprehension of the leading departments of professional knowledge, while the important and practical details connected with forensic medicine, physical diagnosis, the extensive subject of hygiene, the special investigations of particular classes of disease, as those of the eye, skin, and sexual organs, besides a wide range of other subjects, are yet to be learned.

While, therefore, it may be proper to incite the pupil to suitable disciplinary preparation, we regard the inducement of a shortened term of medical study as mischievous in the extreme. The time is not distant when four or five years will be regarded as a period too short, in which to master the important subjects included in our professional curriculum, whatever may have been the preliminary education.

The author of the report very briefly but ably discusses the importance of a sound preliminary education, and particularly urges attention to the classics, mental philosophy, botany, zoölogy, meteorology, and geology.

The reporter objects to the sentiments expressed by former committees, by whom it has been proposed not to increase the number of schools so situated, as not to give the pupils the benefit of hospital practice. He would extend the hand of fellowship to all schools who teach the ordinary course, but would restrict them in conferring degrees of a higher grade than Bachelor of Medicine, leaving the advancement of the pupil in higher attainments, and the conferring of higher degrees, to that class of institutions "having their seat in the great commercial cities," contiguous to hospitals.

He discusses with some severity, mingled with not a little justice, the common methods of hospital and clinical instruction. He looks for little improvement except in those who are the private pupils of a hospital, or who observe at the bedside of the patient of the general practitioner.

He would reconstruct our hospital organization, and adapt it to the wants of the time. This could be done by erecting them into schools of practice, with a special faculty, whose plan of instruction should have a direct relation to the cases in their wards, so that each should become an illustration of the text of the professor.

The committee, in closing their report, submit the following resolutions:

1. *Resolved*, That the Association reaffirm its formerly expressed opinions on the value and importance of a general education to the

student and practitioner of medicine, and that it would gladly enlarge its rule on this subject, so as to include the humanities of the schools, and the natural sciences.

2. *Resolved*, That, in the opinion of this Association, a familiar knowledge of the elements of medical knowledge should precede clinical instruction.

3. *Resolved*, That in order to accomplish the latter, the hospitals, when they shall be elevated to the rank of schools of practice, and the intelligent private preceptor, are the most effectual instrumentalities to be employed.

Report of the Committee on Medical Literature, by N. S. Davis, M. D., of Chicago, Illinois. The first portion of this report is devoted to a consideration of the medical periodicals issued during the year under review. The whole number published was 28, viz., 4 quarterlies, 6 bi-monthlies, 15 monthlies, 2 semi-monthlies, and 1 weekly. This is the greatest number issued in any single country except Germany. Prof. Davis is led to believe that a decided improvement has taken place in the original department of our Medical Journals during the last two years, much of which he would attribute to the influence of the Association. Still he finds just reason of complaint that so much is crude and imperfect, serving merely to fill a certain space in journals, and afford the author an opportunity to see his name in print. The review department of our Medical Journals, with but few exceptions, the reporter characterizes as "meagre and unsatisfactory in the extreme." While we admit the truth of this remark, we are hardly disposed to censure the medical journalists of our country—whose readers desire rather a *coup-d'œil* of each new book than an elaborate review of the subject—for not giving more than an analytical examination of new works as they appear. It must be reserved to quarterlies, or journals especially devoted to reviews, to enter upon an extended and critical analysis of each new publication, and present the existing state of our knowledge of the subjects on which it treats.

The reporter proceeds to notice some of the leading papers which have appeared in the transactions of State Societies and local organizations; the monographs and books which appeared during the year, with brief notices of their contents and character; and concludes with some very judicious remarks upon "the *means* that are best calculated to elevate the character and foster the growth of a medical literature truly national or American." The defects in our medical writings are referred to four primary sources, viz.: 1. Deficiency of preliminary education; 2. The absence of a clear and definite percep-

tion of the fundamental principles of physiology and pathology; 3. Defective modes of investigation, and 4. Too much haste in the preparation of matter for the press. The writer proceeds to remark upon these several heads with much force and truth, and concludes that "our great reliance, therefore, must be on the creation of such a sentiment throughout the profession as will not only restrain individual members from encouraging uneducated young men to enter the ranks of the profession, but as will also develop a nobler idea of what a physician should be, and with it an appetite for a purer, more philosophical and comprehensive, professional literature." The means of effecting this desirable reform he believes to be, the faculties of the medical colleges, the conductors of medical periodicals, and the active members of national, State, and local organizations. We cannot too much commend this portion of Prof. Davis' report; it is ably drawn up, and replete with suggestions of the highest interest to our common profession. Appended to the paper is a tabular statement of all the issues of the medical press of this country, for the year included in the report.

On the Agency of the Refrigeration produced by Upward Radiation of Heat, as an Exciting Cause of Disease, by G. Emerson, M. D., of Philadelphia.—The object of this report is to show, that diseases usually attributed to exposure to the night air, the influence of the moon, &c., are due to the reduction of the temperature of the body by the upward radiation of heat. The law on which depends the deposition of dew—the condensation of the moisture of the atmosphere by the refrigeration of terrestrial bodies from upward radiation in the absence of the sun—was first discovered by Dr. Wells, a native of Charleston, S. C. We can recall no series of experiments more beautifully illustrative of the process of inductive reasoning than those prosecuted to so brilliant a termination by this philosopher in his garden in London, where he had taken up his residence. After explaining the nature of terrestrial radiation, and pointing out some of its ordinary effects, Dr. Emerson proceeds to show "how this rapid means of inducing refrigeration may become active in the production of disease." By having a proper covering, armies have been known to encamp in malarious localities without any ill consequences; such facts are to be explained by the known law that the interposition of any substances, even a passing cloud, between the object and the clear night sky, diminishes the upward radiation, and consequently prevents refrigeration. For this reason, an umbrella is a protection from cold by night, quite as much as from the heat of the sun (solar radiation) by day. To

this refrigeration from terrestrial radiation, or some other physical principle, are due all those evil consequences following an exposure to night air, which have from the earliest ages been ascribed to lunar and astral influences. The committee conclude with the hope that the brief exposition of this fruitful source of disease, which they have been able to give, will lead to more general observation upon this subject, and the application of the simple means of protection which suitable covering affords.*

On the Results of Surgical Operations in Malignant Diseases, by S. D. Gross, M. D., of Louisville, Ky.—In entering upon the duties of his appointment, Dr. Gross made great exertions to obtain, from prominent American physicians and surgeons, the results of their experience on the subject of his report; but with a success by no means commensurate with the importance of the question to be considered. Although thus left to his own resources, the author has produced a paper of great value on one of the most difficult and unsettled questions in modern surgery. In regard to the results of the surgical treatment of cancer, it is impossible at present to do more than approximate the truth, and arrive at conclusions susceptible of material modification in the progress of medical science; this approximation Dr. Gross has made, by exhibiting concisely, and with great research, the present state of our knowledge of the subject of his report. The first division of the report is devoted to *General Observations.* 1. Nature, objects, and difficulties of the inquiry. 2. Origin of malignant disease. 3. Hereditary nature of malignant diseases. 4. Latency of malignant diseases. 5. Circumstances contra-indicating surgical interference. 6. Reproductive tendency of malignant diseases after operation. 7. General rules respecting the manner of conducting excision of malignant diseases. 8. Treatment after operation.

The second division embraces *General Observations on Cancer, in relation to the results of surgical operations.* I. Contribution of Dr. J. M. Warren, of Boston, consisting of, 1. Some operations for the removal of cancer, from which the patient still survives. 2. Others in which the disease, having been removed, has returned after a number of years, and again been subjected to the knife with relief. 3. Others which are interesting from their peculiarity. 4. The statistics of cancer, from the Mass. General Hospital. 5. Cases from public and private practice, the details of which are incomplete. II. Contribu-

* See Art. V. of the present number of this Journal for an ingenious examination of refrigeration as a cause of malarious diseases.

tions of Professor Hamilton, of Buffalo, consisting of 59 cases of operation for the removal of cancer from various portions of the body, all carefully and very accurately arranged in tables. III. Facts and observations contributed by different surgeons, and gleaned from American and European authors.

The third division considers *Cancer of particular Organs, in relation to the results of surgical operations. Cancer of the breast* contains an elaborate examination of the opinions of authors on the treatment of cancer in this situation, from the time of Hippocrates to the present. In the subsequent sections of this division, the author treats of cancer of the eye, gums and jaws, lips, penis, testicle, uterus, anus and rectum, and bones. In this portion of the report, he enters upon a most laborious examination of the medical literature of different countries, and introduces a mass of medical opinion and statistical tables, derived from various sources, which seem to exhaust the subject. The conclusions of the author have, for the most part, already been published; there are some points of interest which he regards as still unsettled, that have not yet appeared, and which we extract:

First. Excision is of doubtful propriety in all cases in which the disease is of hereditary origin, or where it occurs in several members of the same family.

Second. It is doubtful whether an operation should be performed when the patient is very young, and the disease is of rapid growth. There is reason to believe that surgical interference, in such a case, will only expedite the fatal result, which is generally inevitable.

Third. It is problematical whether an operation should be performed when the disease is attended by suppression of the menses, or by great irregularity of this discharge.

Fourth. Not a few surgeons regard a resort to the knife as of questionable efficacy when there is a quickened state of the pulse, occasioned by the local irritation.

Fifth. There appears to be no general agreement among surgeons as to whether extirpation is proper when there are two or more coexistent and accessible cancerous tumors.

Sixth. It is supposed, but the fact is not established, that excision of carcinomatous tumors only tends to hasten the patient's death.

Seventh. It is doubtful whether, as has been asserted by different surgeons, the prospect of a permanent cure is greater, all other things being equal, after an operation on an old cancer, than after an operation on a cancer of recent standing.

Eighth. It has been stated by writers of great respectability, among others by Dr. Macfarlane, of Glasgow, that, in robust women of sanguine temperament, the reappearance of cancerous disease, and its subsequent progress, are more rapid after operation than in nervous or lymphatic persons; an assumption demanding verification.

Ninth. It requires to be proved whether excision ought to be per-

formed in the ulcerated stage of malignant disease, as a means of prolonging life, and of procuring comparative relief from suffering.

Report on the Epidemics of Tennessee and Kentucky, by W. L. Sutton, M. D.—This was the only Report on Epidemics made to the Association, of the eight committees appointed for this purpose. It is, in some measure, a continuation of the Report made last year. It opens with the topography of certain counties, and the meteorological observations made in different localities; these facts the Committee very properly consider the basis of a correct report. The reporter then proceeds to consider the several diseases which have prevailed in his district. Cholera appeared at Memphis, Tenn., and Paris, Ky.; in the former place it occurred in the early part of summer, and was thought to be due to the miasmatic location of the town. At Paris, cold salt-water was taken internally, and freely applied to the surface with satisfactory results; at Memphis, all methods of treatment failed Hooping-cough was rife in a few places, and was treated by Dr. McNelley, of Fayetteville, Tenn., in eight cases, with the free use of nitric acid drinks, with marked success. Measles prevailed in several localities, and at Memphis was quite fatal, principally from pneumonic complications. Dr. Ramsey, one of the Committee, concludes from his observations that this disease has no definite period of incubation. The furunculus epidemic occurred at Memphis during the summer of 1851 and 1852. Cholera infantum is common, in certain localities, every summer, while others are almost entirely free from it. The interesting papers on this disease, which appeared in the medical journals of Tennessee, by Dr. W. T. Baskette and Dr. T. M. Woodsen, are analyzed by the Committee. Diarrhœa and dysentery prevailed in many districts during the summer, the latter of which was quite malignant. The different methods adopted in the treatment of these affections are given in detail, and are of much interest. Fevers depending upon malaria prevailed to a considerable extent in the latter months of the year. We shall only notice the account of an *Anomalous fever*, which prevailed at Memphis, Tenn., late in the fall of 1852. It is given by Dr. Grant, who furnished to the Committee a report of the diseases of that city. He says:

The attack in most of the cases was not preceded by any marked indisposition. Chilly sensations, or a well-marked cold stage, of short duration, ushered in the disease. The reaction which followed was attended by intense heat of the surface; eyes more or less injected; circumscribed flushing of the cheeks; pain in the back; headache; pulse ranging in different cases from 90 to 120 beats in the minute, and continuing throughout the entire course of the attack feeble and unresisting;

the tongue at the commencement showed little evidence of departure from a normal appearance, but soon began to exhibit a line of dry and elevated papillæ, extending back along its centre, which continued to widen, of a dark brown color, exhibiting a notable contrast with the more or less smooth and red tip and ridges of that organ. The thirst for cold drinks was intense. There was tenderness on pressure over the epigastrium. Nausea and frequent vomiting of pale-green fluids were troublesome symptoms. The bowels were not moved, except by medicine, when the dejections were quite fluid at first, and of a pale-green color. The urinary secretion was small in quantity, and highly colored, giving off a strong ammoniacal odor. Hemorrhage from the nose was common; in a few it occurred both from the nose and bowels; and in one case blood flowed from these, and likewise from the uterus, in considerable quantity, two weeks after the last menstrual period. Sleeplessness and jactitation were absent in no instance. Little or no delirium present; intellect clear. No eruptions discoverable. Great prostration of the vital powers present in all. The duration of the fever was from five to fifteen days, most of the cases being convalescent during the first week. It had, like those called continued, its morning periods of partial remission, but they were not the clearly marked remissions of the paroxysmal fevers prevailing at the time.

The gastro-intestinal mucous membrane, which was exempt from implication in the intermittent fevers, was now the part most seriously involved. The remedy found most serviceable was mercury carried to ptyalism. Quinia answered no useful purpose in controlling the disease. Hemorrhages from the bowels seem to have been common, and also beneficial, as no death occurred in these cases. The reporter adds that no cases of relapse were known. Typhoid fever appeared to be epidemic in some districts, but it presented no unusual symptoms, and seems not to have been very fatal. The report concludes with some remarks upon the mortality by phthisis in Memphis, a malarious district, which proves not only that a southern climate is not protective against consumption, but that this disease is equally fatal in a miasmatic region.

On Acute and Chronic Diseases of the Neck of the Uterus, by C. D. Meigs, M. D., of Philadelphia.—The report of Dr. Meigs is entirely clinical in its character, and consists of a running commentary on some of the more common forms of the diseases of the cervix uteri. It aims to be practical rather than original, and, with the aid of an extensive series of illustrations, it will serve the practitioner a good purpose by enabling him to comprehend a class of obscure diseases. As this essay is announced as being published in a separate form, we shall reserve any further remark for the present.

An Inquiry into the Nature of Typhoidal Fevers, based upon a con-

sideration of their History and Pathology, by HENRY F. CAMPBELL, M. D., of Georgia.—In this inquiry, Dr. Campbell bases his theory upon rational induction and disclaims any reliance upon facts or cases of typhoid or typhus fever observed by himself. He gives as his reason for such a course, that "it is obvious to our own mind that any views of disease founded mainly upon rational induction, would be less liable to fallacy when based on the recorded careful observations of others, than when they are merely the interpretation of our own cases." With this explanation, he enters upon the inquiry in the capacity of an analyst. The first part of the report is devoted to a careful and minute analysis of the symptoms of typhoidal fevers, as observed in the *nervous, circulatory, and digestive systems*, and examines attentively all our authorities upon this subject. We have not space to follow the talented author in this investigation, and will only remark that, although we differ with him materially in his deductions, yet we regard his paper as one of the best reviews of present authorities on fever with which we are acquainted. The following will give the reader an idea of the author's peculiar views, as the result of this examination:

Starting with what he considered the rational assumption that the pathology of typhoidal fevers is in the ganglionic system of nerves, we have compared their characteristics and phenomena with, first, the *normal* action of this portion of the nervous system; then, with the known and well-established results of *experimental irritation and action* of various portions of these nerves, and we have found that the analogy is sufficiently close to admit the legitimate inference that the symptoms and pathological lesions of typhoid and typhus fever are produced by a normal action in certain portions of this system of nerves. First, because no typhoid or typhus phenomenon ever occurs, except in regions supplied by this system; secondly, because the peculiar phenomena of these diseases occur in a more marked degree in those parts more abundantly supplied from this source; and thirdly, because the nature of these symptoms are always found more purely and characteristically typhoid in those portions of the organism supplied exclusively by this kind of innervation. And further, on the one hand we are forced to admit the truth of these impressions, because we have hitherto a legitimate and consonant combination of theories, to our own mind, as competent to the full and rational explanation of *all* the phenomena of the disease as the one now offered.

However we may dissent from these opinions, the author's practical deductions are worthy of commendation. These are, to avoid all depressing measures, or such as are calculated to exhaust the nervous energies; and, on the contrary, to resort to sustaining treatment. The plan of Dr. Percival of resorting to cold affusions, especially

in children, he would rationally expect to be highly beneficial, from the known effects of cold water thus applied in improving the nervous centres. He would be led also to favor the use of quinia in large doses, as recommended by Dr. Dundas, and also a resort to *strychnine* in small doses, "with the view of waking up and restoring the diminished energy of innervation, upon which the impaired function depends, in the same manner that we would advise it in other similar cases, where the cerebro-spinal system was implicated."

On Coxalgia, or Hip-Disease, by ALDEN MARCH, M.D., of Albany, N. Y.—Spontaneous luxation, as an occasional accident in hip-joint disease, is the universal opinion of surgical writers. Although this view is not always based upon post-mortem examinations, but seems to be transmitted from one author to another, yet it does not want the demonstrative evidence of actual dissection. It is true, however, that this accident is very often supposed to exist, when the appearances which lead to such diagnosis are due to other causes; in such instances the precise pathological changes which have taken place in the joint are not appreciated.

Upon the examination of the bony specimens of the hip-joint of persons who had died while laboring under a severe form of hip-disease, Dr. March was brought to the conclusion that all the signs usually relied on during life, as diagnostic of an idiopathic dislocation, could be explained by the organic changes in the form and relations of the head of the femur and acetabulum. Impressed with the importance of this idea, the writer has personally examined about forty pathological museums in this country and Europe, and, with paper and pencil in hand, made records of all the morbid specimens of hip-joint, whether wet or dry, amounting to about two hundred. It is not a little interesting to note the fact, that after this patient and laborious examination, extending over seven or eight years, of the actual condition in which the disease left the hip-joint in such a great number of instances, and a most searching analysis of surgical authorities, Dr. March takes the position "that *spontaneous dislocation* of the hip (*as purely the result of morbid action unaided by superadded violence*) *seldom or never takes place.*" We do not perceive that he has made any decided advance upon former writers, for he admits the possibility of the dislocation, and contends only that it is very rare, and is often falsely diagnosticated to exist. Much, however, has been gained by this pathological research and sifting of authorities, in making our knowledge of this troublesome disease more exact.

The second part of Dr. March's essay is entirely distinct from the first. In this he discusses the propriety of extension and counter-extension in the treatment of hip-disease, in an advanced stage, when the surfaces of the joint are covered with organized or organizable matter, a method which he considers peculiar to himself. The great object of this treatment is, by keeping the joint surfaces quiet and in slight apposition, to promote anchylosis. To effect this object, a modification of Physick's long splint is employed, having an opening over the great trochanter to avoid undue pressure at this point. If deformity already exists, Dr. March gives ether, and forcibly brings the limb into its proper position, and at once applies the splint. But two cases are given illustrating this mode of treatment. The method of treating inflamed joints by perfect rest is entirely correct, analogically considered, but we doubt much its practicability when applied to hip-disease. In these cases the disease is not so much local as constitutional, and while rest for the former is of the first importance in its cure, active out-door exercise is the *sine qua non* of the latter. It is very questionable, therefore, if, in his efforts to relieve this formidable *symptom* of a constitutional disease, the practitioner might not be led to employ the means most directly tending to destroy the general health of the patient, and of course defeat his main object.

On the Surgical Treatment of Morbid Growths within the Larynx, by Gurdon Buck, M. D., of New-York.—The basis of this paper is the history of a case of polypus of the larynx which came under the writer's observation. The symptoms were those ordinarily present in this affection, and, as the whole subject was critically examined in a former number of this journal (Vol. viii, N. S., p. 15), we need not pause to detail them. The case derives its chief interest from the several efforts made to remove the morbid growths by external incision, after the plan of Ehrmann, and its final termination in gangrene of the larynx. The first operation revealed to the surgeon the fact that the largest of these growths, instead of being pedicillated, the form most favorable for excision, was sessile. The efforts to remove the latter were unavailing, owing to the deep situation of the larynx, the patient being fleshy, and the height to which the attachments of these growths extended. A few were snipped away, the trachea-tube introduced by removing a portion of the two upper rings of the trachea, and the patient allowed to rest. On the following day the attempt to complete the operation was renewed, but with no better success than on the day before; several portions of the tumor were removed with scissors, and the acid nitrate of mercury applied to the remainder. Fearing

to continue the application of the caustic to surfaces already highly inflamed, the operator determined to make another effort to reach the tumor by extending the incision farther upwards. This operation was, however, postponed indefinitely, owing to the existing swelling and inflammation, and the wound allowed to heal around the tracheal tube. The condition of the patient at first much improved, gradually grew worse, and, in about four months from the first operation, a second was performed in the manner already described, by extending the incision upwards so as to expose the larynx in its whole extent and the os hyoides. It was now discovered that the largest tumor was of a flattened form, closely attached on either side to the ventricles, and spread forward over the base of the epiglottis. The rima was so much contracted by them that the little finger could only be made to enter it from below with considerable pressure, while the forefinger, passed into the mouth, now detected the tumor at the orifice of the larynx. It being found impossible to remove the growth entirely, portions were excised sufficient to allow a free passage through the rima, and the wound closed after properly adjusting the tube. The patient recovered favorably from this operation, but signs of a return of the disease were soon manifested, and in about three months a third operation was undertaken, not however for the purpose of destroying the growths, but to introduce the tube lower in the trachea. From this time the case steadily progressed to a fatal termination; deglutition became more and more difficult; expectoration of what was supposed to be an arytenoid cartilage occurred; and, finally, a bloody discharge from the throat, which assumed a gangrenous odor. She died six months after the last operation, suffocated from the failure in the attempt to introduce the tube which the patient had removed at night. The autopsy revealed extensive gangrene of the larynx, with contraction of the œsophagus. Examined by the microscope, these growths were found to be epithelial. A colored lithographic illustration of the morbid parts accompanies the paper.

Although this operation failed to give permanent relief to the patient, owing to the nature of the attachments of the morbid growths, yet we cannot consider it less creditable to this skilful surgeon, nor unworthy of the praise awarded to Ehrmann's more successful case by Stromeyer, who declared it one of the most brilliant achievements of modern surgery. Had the tumor been pedunculated, which is the most usual form, there is little doubt of the entire success of the operation. It is not to be denied that the attempts to treat this disease by external incision have, except in the instance already alluded to, failed in giving

more than temporary relief, but they have generally been undertaken either in entire ignorance of the cause of the dyspnœa, or at the latest and most unfavorable period in the progress of the case.

Dr. Buck advises the insertion of the tracheal tube when suffocative dyspnœa comes on, and if the patient will consent, the subsequent laying open of the cavity of the larynx, with a view to the extirpation of the tumor. If it is found impossible to remove the morbid growth, he would thoroughly cauterize it with the acid nitrate of mercury before closing the wound, and afterwards treat it by the application of the dilute acid nitrate, or a strong solution of nitrate of silver repeated by the mouth.

Appended to this case is a résumé of the subject of polypus of the larynx, and tables in which the published cases, 42 in all, are carefully arranged. Dr. Buck gives to Dr. Green, of this city, the credit of directing the attention of the profession in this country to this subject, by his treatise on the surgical treatment of polypi of the larynx. This is an error, not in letter, but in spirit. The *first* paper published in this country on polypus of the larynx was by Prof. Parker, of this city, (*New-York Jour. of Med.*, N. S., Vol. viii.,) in which two cases, both occurring in his own practice, were reported with figured illustrations, one of which is the first case of true pedunculated polypus of the larynx recorded in our home medical literature. In this paper, also, were reproduced the material portions of Prof. Ehrmann's monograph, and several other cases were added, of which Dr. Buck has very properly availed himself in the preparation of his valuable tables.

On the Sympathetic Nerve in Reflex Phenomena, by Henry F. Campbell, M. D., of Georgia.—The design of this short article is to establish the precedence of the writer's enunciation of the doctrine of a reflex relation existing between the cerebro-spinal and ganglionic system of nerves, recently put forth by M. Bernard. The views of Dr. Campbell are contained in a paper on the Influence of Dentition in Producing Disease, published in the *Southern Medical and Surgical Journal*, in 1850. The author certainly establishes his claim to priority of publication, as far as regards Bernard's article referred to in the *Gazette Médicale;* but, if we are not mistaken, similar views have been advanced at a still earlier date. As he does not, however, pretend to priority over all others, but only so far as his information extends, we will not be to the trouble of examining the subject farther.

Prize Essays.—The last two articles in the volume are the prize

essays. For the first time since the organization of the society, two voluntary communications were deemed worthy of its prizes. Without disparagement of preceding efforts of this kind, we may justly rank these essays among the most important contributions to medical science which the prize-awards of the association have yet elicited.

The first of these essays is *On the Surgical Treatment of Certain Fibrous Tumors of the Uterus*, by WASHINGTON L. ATLEE, M. D., of Philadelphia. The class of tumors discussed in this paper have hitherto been considered beyond the resources of art, and in its preparation the author has relied entirely upon his own experience. He classifies these growths as follows: 1. Extra-uterine, or surface tumors. 2. Intra-uterine, or cavity tumors. 3. Intra-mural tumors of the uterus. Dr. Atlee gives the diagnostic marks of each of these classes of tumors, and carefully points out the sources of error in diagnosis. In each instance the uterine sound affords much assistance, as with this the relation of the tumor to the cavity and walls of the uterus may be discovered. The author is led from his own experience to believe that these tumors do occasionally undergo the cancerous degeneration; but he admits that the scirrho-cancerous tumors may have been mistaken in their early stages for fibrous tumors. Operations for the relief of these tumors must be undertaken before softening and degeneration takes place. This condition is marked, in the extra-uterine and intra-mural, by the occurrence of paroxysms of acute pain, soreness to the touch, formation of cysts containing liquid on the surface, failure of the general health and strength, emaciation, anasarca and ascites, and the peculiar straw-colored aspect of the skin characteristic of malignant disease. The intra-uterine tumor has, in addition to these symptoms, a sanious fetid discharge; it assumes a brownish, grayish, or black color, and its lower portion softens. Under these circumstances an operation is of doubtful propriety; a fact of considerable importance in the treatment of these tumors in their low degree of vitality, although they may have a highly vascular pedicle and membrane covering them. For this reason, if a section is made through their investing membrane, it may be followed by the death of the whole mass, owing perhaps to the admission of atmospheric air.

Another fact of great importance is contained in the following proposition: "*That the excessive hemorrhages which sometimes occur arise not from the uterus itself, but from the vessels of the membrane which cover the tumors.*" The author supposes these floodings are due to a

rupture of the veins of the covering membrane, which become congested by the growth of the tumor, and the muscular action of the uterus impeding the circulation of the veins, while the arteries still continue their supply. The true method of procedure, and that which has in the author's experience "invariably arrested hemorrhage instantaneously," is thus given: "*During hemorrhage, to pass the bistoury along the vagina into the cavity of the uterus, and make a very free incision into the most exposed portion of the tumor.*" Too much value cannot be attached to this suggestion, if the experience of others shall confirm the correctness of the author's practice.

Dr. Atlee proceeds to relate minutely the histories of 14 cases, in which he has operated for the removal of the class of fibrous tumors above noticed. The operation consists in introducing the knife into the cavity of the womb, and incising the attachments of the tumor, if intra-uterine, or cutting freely into its substance, if intra-mural, and endeavoring to enucleate it with the finger. To facilitate this operation, ergot is given freely some days previously, in order to bring down the tumor and dilate the os. The result of this operation, in the 14 cases recorded, are, 8 recovered; 5 died; 1 under treatment. Of those which died, 1 had pneumonia; 1 anæmia; 1 erysipelas and peritonitis, following gastrotomy, and during a subsequent effort to remove the tumor through the vagina; 1 disease of the heart; 1 peritonitis, the tumor proving to be malignant. In the case under treatment, the author had some doubts as to the nature of the tumor.

The operation of Dr. Atlee is certainly very ingeniously conceived, and seems to have been very dextrously executed; of its practicability, the results thus far given are flattering, especially in the cases of non-malignant, intra-uterine, and intra-mural tumors. In these exceptional cases, where the tumor proves to be malignant, such surgical interference may be productive of great harm. Although, to avoid this contingency, so unfavorable to an operation, Dr. Atlee assumes that the fibrous tumor does not degenerate, yet he is compelled to admit that the scirrho-cancerous tumor may be mistaken for the fibrous, an error into which his own recorded cases show that he has fallen.

The second prize essay is on *The Cell; its Physiology, Pathology, and Philosophy, as deduced from Original Investigations; to which is added its History and Criticism*, by Waldo J. Burnett, M. D., of Boston. This essay was written in the latter part of 1851, to which time the author has endeavored to trace the physiological, pathological,

and philosophical history of the cell. It is obvious, however, that the history and criticism of a science, undergoing such annual modifications as that of microscopical physiology and pathology, written two years since, must necessarily be very imperfect. This deficiency Dr. Burnett has attempted to supply by inserting new matter as the sheets were going through the press. The essay displays the author's usual research, and is a valuable contribution to our knowledge of the cell. We notice some points open to criticism, but as they are not worthy of notice without a much more critical examination of the whole subject than we are at present inclined to enter upon, we shall defer for the present any further remarks. C. G.

Art. XII.—*On the Etiology, Pathology, and Treatment of Fibro-Bronchitis and Rheumatic Pneumonia.* By Thomas H. Buckler, M.D., formerly Physician to the Baltimore Almshouse Infirmary. Philadelphia: Blanchard and Lea, 1853. 8vo, pp. 150.

This is an exceedingly interesting and well-written dissertation upon a subject of very great importance; and it is manifestly the production of a mind well trained to close and scientific observation. The author evidently belongs to that class of physicians who cultivate mental independence as a cardinal excellence; and although we could wish that he had made more extensive and searching investigations, bearing on the special pathological events and relations of the peculiar forms of disease he describes, we are confident that the testimony of all intelligent physicians will confirm the opinion that he has brought forward and elucidated a subject hitherto almost entirely overlooked, yet of the greatest practical importance.

Dr. Buckler modestly presents this little volume as the fruit of gleaning in an old field, from which rich harvests have already been gathered; and we think that the ample results of the gleaning are not particularly flattering to the pretensions of many recent writers on Bronchitis. Though pulmonary engorgement, broncho-pneumonia, and pleuro-pneumonia, have always been recognized as frequent and very grave complications of acute rheumatism, probably few physicians have learned to distinguish the special form of bronchitis described by Dr. Buckler as dependent primarily upon the rheumatic diathesis, and having its election in the fibrous tissues of the pulmonary structures. That such a special variety of inflammation of the fibrous portion of

the pulmonary tissues may occur, would certainly be a legitimate inference from what is known concerning rheumatic inflammation of the fibrous tissues generally. The occurrence of a severe and dangerous form of general pulmonary inflammation as a frequent event in cases of acute articular rheumatism, has been faithfully observed by Latham,* Taylor,† Fuller,‡ and other recent writers. Dr. Latham remarks that "such forms of pulmonary inflammation are portentous ingredients in the clinical history of acute rheumatism, and give a fearful interest to it. * * * In four instances of *bronchitist, he affection was no mere catarrh,* but an inflammation largely diffused through both lungs, producing deep oppression and dyspœna." Out of 136 cases of acute rheumatism, at St. Bartholomew's, Dr. Latham reports 24 cases of pulmonary inflammation. Out of 246 cases of acute rheumatism reported by Dr. Fuller, of St. George's Hospital, 41, or exactly 1 in every 6, were complicated by some form of pulmonary inflammation. These figures will probably be found to correspond very nearly with the observations of most physicians on this point. But the question now arises, does rheumatic inflammation of the fibrous structure of the lungs often, or ever occur as an idiopathic and simple disease dependent solely upon the rheumatic diathesis, yet without any other or general manifestation of rheumatism? Dr. Buckler entertains no doubt upon this point, for in only nine out of twenty-seven of his cases of fibrous bronchitis had the individuals suffered any form of rheumatism previously, while in seventeen of these cases the bronchitis preceded all other manifestations of disease. There was more or less endocardial murmur in eleven cases, pleuritis supervened in five, and pericarditis was observed in four. Five of the individuals suffered on different occasions with rheumatic inflammation of the sclerotic tunic of the eyes; but only two of these ever labored under articular or general rheumatism. The author remarks, that "it is, therefore, probable that persons prone to rheumatic sclerotitis, are also peculiarly subject to fibrous inflammation of the bronchi."

In a large proportion of our author's cases, it appears that there was no other manifestation of rheumatic inflammation than the bronchitis; and in but few was there any general manifestation of rheumatism. It

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* Latham's Clinical Medicine.

† Dr. John Taylor, of Huddersfield, in 'Med.-Chir. Trans.,' vol. xxviii, p. 514.

‡ Dr. Fuller, Rheumatism, Rheumatic Gout, &c., p. 307, et seq.

is stated that most of the cases occurred from exposure of the body to wet or dampness at a low temperature.

The Symptoms.—The following are mentioned as the most important:—

"*The symptoms most strikingly characteristic of the acute variety of rheumatic bronchitis are, profuse, irregular sweats, inordinate sensibility to cold, transient flushings of the face, and either a constant or a paroxysmal and unproductive cough.*"

"There is usually no fixed pain or soreness about the chest, but both are sometimes felt during the act of coughing." "The auscultatory signs, with the exception of an occasional sibilant râle, are entirely negative; so that, so far as these are concerned, the disease has to be made out in most cases solely by the method of exclusion. Where, however, pneumonia sets in, it becomes a most important sign of the preëxisting bronchitis, since it can generally be recognized either by the sputa furnished or by the ear. * * * Moreover, rheumatic inflammation has probably a large share in the production of both narrowing and dilatation of the bronchi, * * the fibrous and cartilaginous tissues of which are softened and rendered plastic by preëxisting rheumatic inflammation."

"In acute fibro-bronchitis, the exacerbations of cough occur usually during the night, while in the subacute variety of this affection this symptom is generally most troublesome during the day."

As to frequency of occurrence of fibro-bronchitis, Dr. Buckler believes, "that, as catarrh occurs sporadically, the rheumatic variety will be found in about five out of twelve cases; but that, during epidemics of influenza, the rheumatic element will be recognized in a smaller proportion of cases." And he adds, "It is believed, also, that the cartilaginous and fibrous structures of the bronchi are more frequently the seats of rheumatic inflammation than any other white tissues of the body."

Though the distinctive symptoms of fibro-bronchitis may be of a singularly negative character, and although Dr. Buckler may have erred in considering this form of inflammation necessarily and uniformly dependent upon the rheumatic element or poison, it is certain that the form of disease which he describes is of very frequent occurrence, and every physician's experience will bear testimony to the fact, that it is often very grave in its consequences. The obstinate and painful cough, profuse perspirations, and exacerbations of fever, which characterize

such bronchitis, never yield to the ordinary remedies for common catarrh; while the most dangerous parenchymatous engorgement, and the most obstinate pneumonias, which we are ever called to treat, are connected with this form of disease. Though we do not think that the disease is necessarily rheumatic, because seated in the fibrous tissues, there can be no doubt that plastic inflammation of the fibrous structures of the bronchi is really of frequent occurrence, notwithstanding the silence of most thoracic pathologists upon the subject. To Dr. Buckler belongs the honor of having first described the disease to American physicians; and whatever may be thought of his theory of its etiology, he has certainly presented the subject in an exceedingly clear and practical light, and by such facts and arguments as must command the general attention of our profession.

Dr. Buckler, at the time he wrote, was probably not aware of the investigations of Dr. Black on the Pathology of the Broncho-Pulmonary Mucous Membrane. Indeed, only the First Part of Dr. Black's papers has yet been published. (*Edin. Monthly Jour. Med. Sci.*, Jan., June, 1853.) As the exceeding richness of research which characterizes this elaborate series of papers amply compensates for the poverty of Dr. Buckler's pathological investigations, we may hereafter recur to some of Dr. Black's conclusions.

Dr. Buckler proposes the following simple, but imperfect, classification of bronchitis:

Bronchitis.	Mucous—Frequently both idiopathic and symptomatic.	Acute, subacute, and chronic.
	Fibrous or rheumatic—Generally idiopathic; often symptomatic.	
	Fibrous or gouty—Never idiopathic; rarely symptomatic.	

He justly remarks, that "it is very remarkable that the differential diagnosis between mucous and fibrous inflammation of the bronchi should have remained without elucidation until this time, particularly when it is remembered that the relation which these two tissues bear to each other is so like that of the two similar tunics of the eye, the sclerotic and the conjunctiva. Probably the reason of this neglect is, that fibrous bronchitis is so often complicated with mucous catarrh and pneumonia." He adds, "It does not appear that any medical writer, ancient or modern, has noticed the existence of any such dis-

case as acute, sub-acute, chronic, idiopathic, or symptomatic fibrous bronchitis, and yet it will be shown that this affection is an entity as well marked as any other in existence, and that it may be recognized by signs as clear and well defined as those which indicate a pleurisy or a pericarditis."

Our author's attention was first called to "the occasionally intractable and fatal character of catarrh, whilst attending in the spring of 1842 a patient who labored under a local bronchitis, confined entirely to the lower lobe of the right lung," which after a month terminated her life. In this case, the autopsy revealed no trace of pneumonia; "each part of every lobe crepitating on pressure. There was partial engorgement of the different lobules of affected lobe, seeming to result from intense injection of the delicate nutritious blood-vessels supplying the terminal air-tubes." Upon section of these terminal tubes of the affected lobe, when separated from the surrounding parenchyma, and washed, they exhibited in their sub-mucous tissues the only evidences found of inflammation in the pulmonary structures.

Here arise the following important questions, which Dr. Buckler proposes to answer:

How is it that one individual recovers without difficulty from a diffused catarrh, in which all the bronchi of both lungs are involved, while another dies of a local bronchitis, involving only the air-tubes of a single lobe? And why is it that one patient may die from two square inches of pneumonic engorgement, while another, treated in the same manner, recovers rapidly from a pneumonia involving one entire lung?

When a man is treated for, and dies of pneumonia, or any other affection, and an autopsy is made, the attending physician is satisfied, because his diagnosis is proved to be correct. And correct it doubtless might be, as far as his observation, and the present state of medical knowledge, enabled him to go; but did he diagnosticate the condition in which the patient died, and provide properly for the dangers which it involved? Hundreds of patients have recovered from pneumonia, involving twice as much of the pulmonary parenchyma as we find in the supposed case, and why, therefore, did this or that individual die of the particular lesion discovered? What were the antecedents, the supervening accidents, or the associated circumstances, which induced the fatal result? Of what morbid condition did the patient die?

Dr. Buckler devotes a chapter to the consideration of the vascular mechanism of the pulmonary circulation, in which he gives a very satisfactory account of the mode in which fibrous bronchitis and pneu-

monia occur, and the nature of the grave pathological events which are thereby induced. In this connection he expresses some opinions in favor of the therapeutic value of bloodletting, which, by many of his readers, may be deemed gratuitous, and unwarranted by experience; but his suggestions on this point are certainly worthy of attentive consideration. In his discussion of the question of the rheumatic element, as connected with fibro-bronchitis, Dr. Buckler makes quotations from the writings of Tissot, Rodamel, Stoll, and Boerhaave, showing that those venerable observers recognized the frequent occurrence of a peculiar and obstinate pulmonary inflammation as an event in the history of rheumatism. But associated as such testimony is with the vague notions of an antiquated humoral pathology, it is valuable only so far as the observation of the events on which it is based is concerned.

By no one class of evidences or arguments does our author succeed in demonstrating the dependence of fibrous bronchitis upon the rheumatic diathesis, but by the *tout ensemble* of events and evidences it is rendered quite probable that the inflammation in question usually depends upon the same idiopathic causes as induce rheumatism in other fibrous tissues of the body. In the analysis of twenty-seven cases of fibro-bronchitis observed by Dr. Buckler, it does not *certainly* appear that even a majority of them were necessarily of rheumatic origin, unless the fact of the sub-mucous bronchial inflammation be taken as evidence, simply upon the ground of its being seated in fibrous tissues. With the light we at present have upon this subject, we cannot admit that fibro-bronchitis is necessarily of rheumatic origin. Indeed, we are prepared to prove, that, in a large proportion of cases, the rheumatic element does not enter into its history. Though it is not definitely known in what the specific element of rheumatism consists, it is known by what laws its manifestations are governed; and judging by these laws, and by what is known concerning the pathological history of bronchitis, we may safely conclude, that a large proportion of those cases, which by our author would be justly termed fibro-bronchitis, are really rheumatic. The eleven illustrative cases given by Dr. Buckler are, perhaps, sufficiently conformable to the rheumatic law to merit the title he applies; but what was the nature of the other sixteen cases which he introduces, does not so certainly appear.

We dwell upon this point, because we believe it to be a matter of primary importance, in the treatment of these cases, clearly to discrim-

inate such as are of rheumatic origin from those which are of a simple plastic variety. Long before the appearance of Dr. Buckler's treatise, we had learned to recognize and treat the forms of bronchitis and pneumonia, which are associated with the rheumatic diathesis; and if we have not greatly erred in our observations and study of this subject, we have quite as often met with another class of similar cases in which there existed no evidence of rheumatism.

In this connection, we would refer to some of the results of Dr. Black's elaborate researches, which are of such a character as to merit the utmost reliance, and which we conceive will do more to advance the scientific pathology of bronchitis than all that has been hitherto written. But our references must be brief, as we have already exceeded the limits we designed for our notice of Dr. Buckler's interesting essay.

Under the head of Specific Inflammation of the Broncho-Pulmonary Membrane, Dr. Black remarks, that the bronchi are liable to specific inflammations, depending upon the different poisons of scarlatina, etc., and the morbific agents of gout and rheumatism; and that the general pathological conditions of the membrane, and the phenomena arising out of them, are very similar to those of the simple forms of inflammation, though the products of the inflammation are occasionally modified by the particular poison or diathesis which influences the system at the time. Thus the sputa of arthritic and rheumatic inflammation of the membrane Dr. Black frequently found to contain urate of ammonia, and occasionally the urates of soda and of lime.

Under the head of Bronchitis involving the submucous tissue, he says that "all the severe forms of simple bronchitis are referable to this variety"; which he has found to differ from the common epithelial catarrh in the following important particulars:

1. Respective duration. 2. Type. 3. The tissues involved. 4. Nature and composition of the discharge from the affected membrane. 5. Effects, both primary and secondary.

The following are among the many important conclusions at which he has arrived by careful investigations:

Fibro-bronchitis may be either acute or chronic, while epithelial bronchitis is always acute.

In the sputa of fibro-bronchitis there are usually found certain organic and inorganic bodies, in addition to the epithelial scales, etc., seen in the epithelial variety.

The effects of submucous inflammation of the bronchi are, bronchial obstruction, hypertrophy, ulceration, and bronchial abscess, as primary; and emphysema, bronchial dilatation, and collapse and atrophy of the pulmonary tissue, as secondary. The congestion and engorgement of the pulmonary tissues is much more intense than in simple catarrh. The sympathetic fever, or, when the engorgement is excessive, the great prostration arising therefrom, is frequently marked and dangerous.

Aided by the light which Dr. Black's investigations have thrown upon this subject, it is not difficult to make out a clear differential diagnosis in any case of bronchitis or broncho-pneumonia. And although Dr. Buckler has entirely neglected to avail himself of the aids of microscopical anatomy, and though he has even suggested the impossibility of deriving much light from dead-house investigations, Dr. Black, true to the present demands of pathological science, has faithfully interrogated nature in all the morbid conditions in the forms of disease in question, neglecting no anatomical, physiological, chemical, or microscopical research which could be made available.

As instances of the exactness and importance of Dr. Black's demonstrations, we would refer to his conclusions in reference to the pathological events of the second or plastic stage of bronchitis involving the submucous tissue.

1. That "there is invariably exudation into the submucous tissue," and also similar exudation into the basement membrane of the mucous tissue.

2. The coagulated portion of the exudation into the fibrous tissue "forms a nutritive matrix, similar to the basement membrane in the healthy condition and action of that structure; and in it germinal centres arise from molecular aggregation of the fibrin, which possesses an inherent capability of being developed into cells," and these exudation cells undergo rapid development and organization, conformably to the laws of cell-life, producing hypertrophy of the affected tissues, and consequently grave pathological consequences; or at an earlier or later period the exudation cells may undergo transformation into pus, through the agency of oxygen in respiration, the epithelium and its basement membrane of the mucous tissue becoming denuded or destroyed to a greater or less extent, and ulceration resulting.

As it was our design merely to call attention to certain points of

great practical importance, we will here close this examination of these contributions to the pathology of bronchitis, by referring to the bearing which they have upon the most occult and fatal forms of disease to which the pulmonary structures are liable.

Pulmonary Tuberculosis.—Though it is undoubtedly true that tubercle is not a product of the degeneration of lymph, it is certain that inflammation of the broncho-pulmonary membrane almost uniformly precedes and accompanies the development of tuberculosis; and Dr. Black has found that an exudation of aplastic lymph is strikingly characteristic of fibro-bronchitis, in individuals of the tubercular diathesis.

Pneumonia.—The statistic observations of Grisolle and others exhibit the fact that from 25 to 30 per cent. of all cases of pneumonia are preceded for some days, weeks, or months, by well marked bronchitis; and Dr. Buckler justly asks, "If the bronchitis were suitably treated before the pneumonia sets in, might not the engorgement which complicates these cases so sadly, and adds so materially to their danger, be prevented effectually?"

Asthma.—The fact is now well established that all cases of true spasmodic asthma are found to be connected with previous and continual inflammation of the bronchia; and the rigid investigations and recent experiments of Dr. Black have furnished absolute demonstrations of the inflammatory origin of asthma, while they point out the therapeia most applicable to its cure or relief.

Gangrene.—Speaking of the complication of idiopathic pulmonary engorgement with fibro-bronchitis, Dr. Buckler remarks, that "the congestion surrounding the different pulmonary structures is so absolute, and the circulation in the delicate and tortuous branches of the nutritious arteries is in many places as effectually cut off as though a ligature were tied about them; and death of the lobules thus deprived of nutrition, or gangrenous eschars, are the necessary results."

On the subject of treatment of fibro-bronchitis, Dr. Buckler makes some pertinent suggestions; among which, he gives especial prominence to blood-letting, which he advises to be resorted to largely in the early stages if pneumonia be present. This he would follow with stimulants and stimulating expectorants, diaphoretics, mild purgatives, and ipecacuanha. Where the nervous system is especially depressed, he considers that "the administration of antimony is little less than murderous"; and he asserts that, "in uncomplicated fibro-bronchitis, antimony is of no value whatever, and its use is to be as little thought

of as in the treatment of articular or any other form of rheumatism." And generally, the main indications are: "1st. To reduce plethora. 2d. To use such catalytic agents as are best calculated to relieve the inflammatory condition of the blood, and by their antiplastic effects prevent the organization of coagulable lymph. 3d. By the use of anodynes, to calm the irritability of the nervous system, quiet the cough, and thereby give partial rest to the inflamed bronchi and engorged parenchyma." And he remarks that "in all cases of this affection, and especially those attended by profuse sweating, it is very indispensable to see that the drinks and the diet of the patient are well supplied with common salt."

We trust that Dr. Buckler's interesting *brochure* will awaken a more lively interest in the observation and study of pulmonary affections; for he has certainly proposed some very interesting and practical topics for professional study, and in a field where any advancement in pathological knowledge will insure inestimable benefits to suffering humanity. E. H.

ART. XIII.—*The Pathology and Treatment of Pulmonary Tuberculosis; and on the Local Medication of Pharyngeal and Laryngeal Diseases, frequently mistaken for or associated with Phthisis.* By JOHN HUGHES BENNETT, M.D., F.R.S.E., Professor of the Institutes of Medicine and of Clinical Medicine in the University of Edinburgh, &c. &c. Edinburgh, 1853. 8vo, pp. 142.

THAT the indefatigable and accomplished author of the ingenious and learned treatise on Cancerous and Cancroid Growths is fully competent to investigate the occult and complex history of Tuberculosis, his past contributions to science bear ample testimony; and that the inquisitive and studious pathologist, who produced the great work on Leucocythema, and who was also the first in Great Britain to propose the use of cod-liver oil for phthisis, as well as the first to publish a plausible theory of its *modus medendi*, should diligently investigate and attentively study all the pathological events and phenomena of tuberculosis, might have been anticipated.

The elegant little treatise before us shows how faithfully and intelligently these investigations have been pursued, and how successfully the author's studies have resulted in clearing up some of the most

doubtful points and conflicting doctrines hitherto entertained in reference to the history and treatment of pulmonary tuberculosis.

Though some of the statements and deductions contained in this excellent treatise are marked by that unqualified confidence in certain favorite theories, and by that disposition to hasty and fearless generalization to which the author has an acknowledged proclivity, it is characterized by all that accuracy of physiological and pathological research and illustration, that clearness and candor of reasoning, and that directly practical design, which always distinguish the labors of the true medical philosopher.

Dr. Bennett devotes the first half of his treatise to the Pathology of Pulmonary Tuberculosis, which he discusses with characteristic intelligence and independence. In reference to the histology of tubercle, our author entertains no views which are individually peculiar; but he has beautifully illustrated and very lucidly stated the most important facts connected with this subject.

It is in connection with the account of the nature of tubercle, and the causes of its production, that the peculiar views and the bold philosophy of Dr. Bennett are made to appear. But, even upon these topics, we think that few candid and accurate observers will take exceptions to any of Dr. Bennett's suggestions, though he pushes his inquiries to the discovery of ultimate causes.

Though we do not think that our author has yet fully demonstrated his leading doctrine, that the formation of tubercle depends mainly upon faulty assimilation or dyspepsia, we believe that common observation strongly sustains Dr. Bennett's opinions and deductions upon this subject. Yet we think that we do Dr. Bennett no injustice by saying that his statements and his mode of argument disclose an overweaning anxiety to corroborate his favorite but questionable theory, on the 'Structural Relation of Oil and Albumen in the Animal Economy,' proposed by him in 1847. (*Edin. Monthly Jour. Med. Sci.*, Sept., 1847.)

Dr. Bennett's opinions on the subject of the etiology and the mode of formation of tubercle are already known to many of the profession, as most of the arguments contained in the work before us have already appeared in the Edinburgh Journals and the British Reviews; but we will quote the following statements, which sufficiently exhibit the author's views:

If, from the histological facts previously stated, we seek to deduce

the nature of tubercle, it can scarcely be doubted that it is an exudation of the liquor sanguinis, but one which presents marked differences from the simple or inflammatory exudation on the one hand, and the cancerous exudation on the other. * * * *

We observe, in a tubercular exudation, that it occurs for the most part in young subjects, between the periods of dentition and of adult age; that it may also occur in all tissues, but is by far most common *primarily* in the lymphatic glands, and afterwards in fibrous or albuminous textures, as the lungs and serous surfaces; that its progress is generally exceedingly slow; that there is no disposition to the formation of perfect cell-formation, but rather to abortive corpuscles, which form slowly, and slowly break down; that there is little tendency to absorption, but great liability to disintegration and ulceration; and finally, that the local changes are almost always preceded by derangement of the primæ viæ, and a group of symptoms known under the name of dyspepsia.

Taking, then, the products of simple inflammation as a standard, we cannot fail to remark that while the cell-development of tubercle is below, that of cancer is above, this standard. Of the three kinds of exudation, tubercle is the lowest, and cancer the highest, in the scale.

On what this difference in the formative power of the exudation depends we are ignorant, but every kind of reasoning must lead us to the conclusion, that these different changes and effects depend, not upon the vascular system, which is the mere apparatus for the production of exudation, not upon the nervous system, which conducts impressions to and from this apparatus, and not on the texture, which is the seat of the exudation, as that varies, whilst the cancerous or tubercular formation is the same; but on the inherent composition or constitution of the exudation itself. On this point most pathologists are agreed, and hence the supposed existence of various kinds of dyscrasiæ, originating in the blood, which, its iimagined, explain the different results produced. But here pathologists pause; having once traced these lesions back to the blood, they are content; and they have not sufficiently taken into consideration that the blood itself is dependent for its constitution on the results of the primary digestion in the alimentary canal on the one hand, and the secondary digestion in the tissues on the other. Yet it must be evident to every physiologist that, if it be the constitution of the blood which determines that of exudation, the causes which produce this must be sought in those circumstances which operate on the composition of the former fluid.

Now numerous facts render it probable that, while the blood is normal in simple exudation, it contains an excess of nutritive materials in cancerous, and a deficiency of them in tubercular, exudation.

Of the dependence of tubercle upon a special diathesis, Dr. Bennett entertains no doubt; and of the wide difference between the tubercular

and the cancerous diathesis, our author expresses himself even more positively than Mr. Paget. Considering tubercle, then, as a specific exudation, dependent upon a special constitution of the circulating fluid, Dr. Bennett observes that it transudes in a fluid state through the capillaries, and collects in those places outside the vessels that offer least resistance; and hence the morbid deposit is found to occur principally in the air vesicles during the early stage of tuberculosis; but whether the deposit is in any manner associated with structural changes in the epithelial cells of the vesicles, as described by Virchow and Schroeder, our author does not notice; but from his theory of the strictly humoral origin of the exudation, we infer, that on this point he would not agree with the above-mentioned pathologists.

In reference to the ultimate nature of those pathological and physiological changes in the blood, upon which Dr. Bennett believes that the origin of tubercle depends, he remarks, that "a healthy nutrition of the body cannot proceed without a proper admixture of mineral, albuminous, and oleaginous elements"; and *how* these elements combine in the primary, and form into tissues in the secondary assimilation, he ingeniously attempts to illustrate, as follows:

The successive changes which occur for the purposes of assimilation in the healthy economy may be shortly enumerated as follows: 1st. Introduction into the stomach and alimentary canal of organic matter. 2d. Its transformation by the process of digestion into albuminous and oily compounds: this process is chemical. 3d. The imbibition of these through the mucous membrane in a fluid state, and their union in the termini of the villi and lacteals, to form elementary molecules: this process is physical. 4th. The transformation of these, first, into chyle corpuscles, and secondly, into those of blood, through the agency of the lymphatic glandular system, which is a vital process. It is from this fluid, still further elaborated in numerous ways, that the nutritive materials of the tissues are derived, so that it must be evident, if the first steps of the process are imperfectly performed, the subsequent ones must also be interfered with. Hence we can readily comprehend how an improper quantity or quality of food, by diminishing the number of the elementary nutritive molecules, must impede nutrition. * * * * *

The peculiarity of phthisis, however, is, that an excess of acidity exists in the alimentary canal, whereby the albuminous constituents of the food are rendered easily soluble, whilst the alkaline secretions of the saliva and of the pancreatic juice are more than neutralized, and rendered incapable either of transforming the carbonaceous constituents of vegetable food into oil, or of so preparing fatty matters introduced into the system as will render them easily assimilable. Hence an in-

creased amount of albumen enters the blood, and has been found to exist there by all chemical analysts, while the fat is largely supplied by the absorption of the adipose tissues of the body, causing the emaciation which characterizes the disease. In the meanwhile, the lungs become especially liable to local congestions, leading to the exudation of an albuminous kind, which is tubercle. This, in turn, being deficient in the necessary proportion of fatty matter, elementary molecules are not formed so as to constitute nuclei capable of further development into cells; they therefore remain abortive, and constitute tubercle corpuscles. Thus a local disease is added to the constitutional disorder, and that compound affection is induced which we call phthisis pulmonalis,—consisting of symptoms attributable partly to the alimentary canal, and partly to the pulmonary organs.

It will be observed that this elaborate and apparently complete theory of tuberculosis is made to depend, in a very important manner, upon the correctness of certain hypotheses which have yet to be absolutely demonstrated, viz., the structural relation of oil and albumen, and acidity of the alimentary canal.

Upon these questions we will hold no argument with our learned author, but we do request him to furnish more satisfactory proofs of the points in question.

In his chapter on the "Natural Progress of Tubercular Exudation—its Tendency to Ulceration—its Modes of Arrestment," Dr. Bennett states that "at first tubercle is deposited in a fluid state from the capillaries, in the same manner that lymph is. In this condition it insinuates itself into the interstices of the pulmonary parenchyma, passes through the lining membrane of the oil-vesicles, and fills their interior." And he further states that numerous successful injections of pneumonic, tubercular, and cancerous lungs, in his museum, clearly demonstrate that the exudation in all is poured out in the same manner, and occupies the same position in the pulmonary texture. He further remarks:

A miliary tubercle may, in this manner, block up from three to twenty of these air-vesicles. It now coagulates and constitutes a foreign body, which can only be removed by being again broken down and rendered capable of being either absorbed or excreted. * * * This softening is a disintegration or slow death of the tubercular exudation, constituting true ulceration, which is more or less extensive according to the amount and superficial extent of the morbid deposit. When recent, the pulmonary parenchyma in the immediate neighborhood is more or less coagulated; and when chronic, it is thickened and indurated, often forming a capsule which surrounds the tubercular

deposit. * * * The bronchi are necessarily involved; their terminal extremities are among the first structures affected; and as the tuberculosis proceeds, all the appearances characteristic of chronic bronchitis are produced. As the ulcerative process extends, the lung is more and more destroyed, until at length it can no longer carry on its important functions, and the patient dies, or the fatal result, as it commonly happens, is hastened by disease in other organs.

Dr. Bennett's account of the process of this ulceration, and of the not unfrequent evacuation and cicatrization of the cavities, contains nothing new; though he justly dwells upon the obvious inferences to be deduced from the fact that such cicatrices, as well as encysted cretaceous and calcareous degenerations of tubercle, are very often and unexpectedly met with in autopsies. In a series of observations made on this point, Dr. Bennett arrived at the conclusion, "that the spontaneous arrestment of tubercle, in its early stage, occurred in the proportion of from one-fourth to one-third of all individuals who die after the age of forty."

To illustrate this subject, Dr. Bennett introduces the history of several *cases*, in which the evidences of this tendency to spontaneous cure in cases of tuberculosis have been exhibited, either by post-mortem demonstration or by the history of the living patient; but on this subject our author has offered nothing of special interest.

We must demur at Dr. Bennett's *ad captandum* style of discussion on some of the nicer and more complex questions, which by the most reliable pathologists are yet held *sub judice;* e. g., speaking of his conversations and correspondence with *distinguished physicians*, in reference to the curability of phthisis, he says: "I once made an effort to accumulate the experience of these distinguished men, on this point alone; and had I done so, it would have constituted an unanswerable amount of evidence as to the *curability even of the worst cases of phthisis*": and he gravely adds, "want of time, however, prevented them from writing down the facts."

Now it may effectually serve Dr. Bennett's purposes to make such statements; but we believe them to be as unreliable as they are unworthy the connection in which they appear. Living in the goodly city of Edinburgh, and having a reputation for great knowledge and peculiar skill in the treatment of phthisis, it may be a pleasant thing for his patrons to know that Dr. Bennett *can cure even the* WORST *cases of phthisis;* but such distinctive notoriety we should deem as unenviable as it is professionally dishonorable and unjust.

General Treatment of Tuberculosis.—On this subject Dr. Bennett

does not seem to have found out anything new or important, though he has much to say about the dyspeptic origin of phthisis; and as a remedy for this state of faulty assimilation, he has unbounded confidence in the analeptic properties of the cod-liver oil. He would base the treatment solely upon the following pathological propositions: 1st. That tubercular diseases will heal of themselves, if we can support the nutrition of the system. 2d. That, with this view, our efforts should be rather directed to the digestive than to the pulmonary system. And, 3d. That the kind of morbid nutrition which exists, is excess of albuminous and deficiency of the fatty element in the chyle.

To illustrate his views of the curability of phthisis by the agencies he has indicated, Dr. Bennett has introduced a tedious history of twenty-five cases; but, unfortunately, they do not establish any of the principles proposed, for the histories of these unfortunate patients are too faithfully represented by "CASE 25.—*Advanced Pulmonary Tuberculosis; Cod-Liver Oil; Death from want of perseverance in remedial measures.*"

Dr. Bennett, in common with most physicians, has often seen the progress of tuberculosis arrested in its early stages, and occasionally has seen cases of unquestionable tubercular disintegration and phthisis actually recover. He has witnessed the unquestionably salutary effects of cod-liver oil, and improvement of the patient's hygiene; but we think that he has yet to show that tubercular phthisis is essentially and generally a curable disease, by the means which he has proposed. Not that there exists a doubt of the fact that a certain small proportion of cases are cured spontaneously, or by treatment, but that all that is known concerning the history of pulmonary tuberculosis shows it to be a grave constitutional malady, usually hereditary, and in a large majority of cases, tending to a fatal termination.

But there are certain grave forms of inflammatory and ulcerative disease of the bronchi and the larnyx, often, and we believe generally, mistaken for tubercular phthisis, and which, though too often fatal, are nevertheless perfectly amenable to curative treatment. These affections of the air-passages may and should be accurately discriminated by physicians; and, with the knowledge which now exists on the subject of physical diagnosis, and aided by such excellent treatises as that of Mr. Ancell on Tuberculosis, and of Dr. Black on the Broncho-Pulmonary Mucous Membrane, no physician can have an apology for permitting this very large and interesting class of patients to become the victims of charlatanry, much less can there be an apology for error or failure in the management of the diseases in question.

Dr. Bennett has very properly devoted the last chapter of his work to 'Observations on the Use of Local Applications to the Pharyngeal and Laryngeal Diseases, which are frequently mistaken for, or associated with, Pulmonary Tuberculosis'; to which, singularly enough, even he had paid no attention until some two years ago, when he met with the writings of Dr. Green, of this city, and from these he seems to have acquired his knowledge on this subject; though it is well known to the profession that an excellent treatise on Laryngeal Phthisis, etc., by MM. Trousseau and A. Belloc of Paris, published in 1837, first described this class of diseases, and made known the mode of local treatment, which has lately become so popular.

Dr. Bennett attempts no elucidation of the pathology of these local affections, but gives the history of several cases illustrative of the value of the local treatment with the *nit. argenti;* and from which he draws the following conclusions, 1st, That not unfrequently diseases, entirely seated in the larynx or pharynx, are mistaken for pulmonary tuberculosis; 2d, That even when pulmonary tuberculosis exists, many of the urgent symptoms are not so much owing to disease in the lung, as to the pharyngeal and laryngeal complications; 3d, That local treatment may not only remove or alleviate these complications, but that, in conjunction with general remedies, it tends in a marked manner to induce arrestment of the pulmonary disease.

Though these conclusions are important and true, we regret that Dr. Bennett has not more to offer upon this subject, and that he has not more thoroughly studied the pathology of these local affections, for they not only deserve to be investigated *de novo*, but we are satisfied that when their pathological history comes to be better understood, the special topical medication will be more intelligently applied, and at the same time assume less importance in the history of cure.

From this examination of Dr. Bennett's work, it will be observed that it cannot lay claim to the dignity of a complete treatise on pulmonary tuberculosis, but that it is rather a hastily-prepared, and imperfect monograph, issued to make known a new theory, and to illustrate the peculiar doctrines of its author. How far it may prove available for practical purposes and the advancement of sound pathological science, remains to be seen. E. H.

BIBLIOGRAPHICAL NOTICES.

ART. XIV.—*The Elements of Materia Medica and Therapeutics.* By JONATHAN PEREIRA, M. D., F.R.S.A., L.S. Third American Edition, Enlarged and Improved by the Author. Including Notices of Most of the Medical Substances in Use of the Civilized World, and forming an Encyclopædia of Materia Medica. Edited by JOSEPH CARSON, M. D., Professor of Materia Medica and Pharmacy in the University of Pennsylvania. Vol. 1, 8vo, pp. 838, 1852, and vol. 2, pp. 1226, 1854. Philadelphia: Blanchard & Lea.

IT is with mingled feelings of pleasure and pain that we announce to our readers the completion of this exceedingly valuable work—pleasure that a new edition of a work of such great merit is now accessible to the mass of the profession—and of pain when we remember the sudden and unexpected demise of its distinguished author, at the moment when the completion of the work was so near at hand. Many, if not all our readers, are aware of the fact that the last volume of this edition comes to us in part, only, completed by the author. The completeness of this edition in this respect, however, is far greater than that of the last English. In the revision of it, says the author, "the recent publication of new editions of the London and Dublin Pharmacopœias, rendered necessary a careful revision of the formulæ of the British Colleges, and entailed on me no trifling labor. I have embodied all recent discoveries of importance which relate to the subjects treated of in this work," (*Author's preface to Amer. Edit.*)

The labors of the author on the first volume, with especial reference to this American edition, are a gratifying proof of his desire to render it a perfect encyclopædia of Materia Medica, suited to the wants of the American, as well as English practitioner of medicine, while at the same time they have placed the American public in possession of "the last revised work of Dr. Pereira, and the most complete that he published." From the preface of the English editors to the second volume we learn that "at the time of his decease, the learned author had so far advanced with the present volume as to have completed the description of that important article of the Materia Medica, CINCHONA." The remainder of the volume passed under the revision of Drs. Taylor and Rees, and in the performance of their duties they have not deemed it proper to interfere with the views or opinions of the author, but, when circumstances rendered it necessary they have added such remarks as appeared to them requisite for the further elucidation of the subject.

The work as a whole, we perceive, has assumed an entirely new shape. The mineral substances of the Materia Medica have been placed entirely in the first volume, and the organic in the second, and numerous additions have been made to each department, particularly the organic. "The additions comprise four hundred pages of new matter; and the articles of Materia Medica, of which a complete medical and

scientific history is given, amount to three hundred and sixty." From this extract it will be seen that the author and editors have each availed themselves of the advantages which the progress of science offered to render complete and useful this edition to the present time; and when we remember that Philology, Natural History, Botany, Chemistry, Physics, and the Microscope, are all brought forward to elucidate the subject, one cannot fail to see that the reader has here a work worthy of the name of an encyclopædia of Materia Medica. Our own opinion of its merits, is that of its editors, and also that of the whole profession, both of this and foreign countries—namely, "that in copiousness of details, in extent, variety, and accuracy of information, and in lucid explanation of difficult and recondite subjects, it surpasses all other works on Materia Medica hitherto published." We cannot close this notice without alluding to the special additions of the American editor, which pertain to the prominent vegetable productions of this country, and to the directions of the United States Pharmacopœia, in connection with all the articles contained in the volume which are referred to by it. The illustrations have been increased, and this edition by Dr. Carson cannot well be regarded in any other light than that of a treasure which should be found in the library of every physician.

ART. XV.—*A Treatise on Venereal Diseases.* By A. VIDAL (de Cassis,) Surgeon of the Venereal Hospital of Paris, &c., &c., with colored plates. Translated and Edited by GEORGE C. BLACKMAN, M. D., Fellow of the Royal Medical and Chirurgical Society of London, &c., &c. New-York: Samuel S. and William Wood. 1854. 8vo, pp. 499.

THE appearance of a new work on venereal diseases, translated from the French, will not create any great surprise, so numerous have been the contributions to this subject from abroad within the last year. But the studious physician will recollect that most of these republications and translations have emanated from the school of Ricord. He is also aware that the doctrines of this great teacher, in regard to the transmissibility of secondary accidents, a virulent blennorrhagia, &c., have been called in question, and raised an opposition which combines the best surgical talents of France, Germany and England. The whole ground has been reviewed, and each subject examined by the contending parties before the Academy of Medicine, Paris, in one of the fiercest discussions which that learned body has ever witnessed. Most prominent among the leaders of the opposition to the received doctrines of syphilis is Ricord's confrère, in the Hôpital du Midi, M. Vidal, the author of the work before us.

We cannot at this time do more than express a general opinion of the character of this treatise. We have, of course, as the basis of the work, the peculiar views of the author, which are considered at length and with much spirit in opposition to those so long advocated by Ricord. This does not, however, enter into the practical portions of the volume,

which will be more generally sought after, and with which we are much pleased. It is more complete in practical details than any work which the practitioner can ordinarily consult, and for this reason may be especially commended to his attention.

Dr. Blackman has performed his part as translator and editor, in the most satisfactory manner. His personal familiarity with the practice of M. Vidal, whose views he cordially advocates, and also of his great opponent Ricord, as well as an extensive acquaintance with the literature of the subject, peculiarly qualified him for the task. Every subject treated by the author has been prepared by the editor to meet the wants of the American practitioner; and several, too briefly examined by the former, have been enlarged by the latter.

The typographical execution of the work is good, and the illustrations, with colored drawings, are numerous and excellent.

ART. XVI.—*Pneumonia: Its Supposed Connection, Pathological and Etiological, with Autumnal Fevers:* Including an Inquiry into the existence and Morbid Agency of Malaria. By R. LA ROCHE, M. D., Member of the American Philosophical Society; of the American Medical Association; Fellow of the College of Physicians of Philadelphia, etc., etc. Philadelphia: Blanchard & Lea. 1854. 8vo, pp. 502.

THIS goodly volume, we are told by the author, has grown to its actual respectable dimensions from very small beginnings. The first step in its production was the writing of a friendly letter of a dozen pages to a valued friend, who holds an important position among the teachers of a distant State, in review of a clever essay by him on pneumonia. The main object in the preparation of the volume has been to point out the erroneous views entertained by respectable writers on certain pathological and etiological subjects; and this not alone in reference to pneumonia, but the whole class of paludal fevers; and also to prove that etiologists, who regard the various forms of autumnal fevers as due to the action of particular poisons floating in the atmosphere of specific localities, have just cause for entertaining that belief. As our space does not permit us to give more than a passing notice of this work, on the present occasion, we will simply add that a more ample, clear, and forcible exposition of the groundless nature and dangerous tendency of certain pathological and etiological heresies, has seldom been presented to our notice.

ART. XVII.—*A Text-Book of Anatomy, and Guide in Dissections for the use of Students of Medicine and Dental Surgery.* By WASHINGTON R. HANDY, M. D., Professor of Anatomy and Physiology in the Baltimore College of Dental Surgery, late Professor of Anatomy and Operative Surgery in Washington University, Baltimore. With 264 Illustrations. Philadelphia: Lindsay & Blakiston, 1854, 8vo., pp. 810.

THAT the school of Baltimore can justly lay high claims to literary

eminence in dental science does not admit of question; and their untiring zeal and attention to dental education is evidenced in their frequent publications of an elementary character, pertaining to the science of dentistry. This work of Dr. Handy has evidently been designed with special reference to the claims of the student and practitioner of dental surgery; and, to use his own language, his leading object has been to prepare a work "adapted alike for the dental as well as medical student—one which directs *special attention to the mouth.* Showing, step by step, the important anatomical and physiological relations which it has with each and all the organs and functions of the general system." In carrying out this design, the author, after giving a general outline of organization, divides the work into four parts.

The first part teaches the *alphabet* of Anatomy on the elementary tissues of the body. The second part begins with the head, and describes its organs, as far as possible, in their functional order and dependency. This part is the most complete, by showing the anatomical and physiological relations of the mouth with the different parts of the head. The third part, embracing the trunk, is examined in the same physiological order, and completed in the same manner, by demonstrating the *relations* of the *mouth* with its several organs, viscera and functions. The fourth part comprises the extremities, which do not admit of the same kind of arrangement so readily, and are demonstrated in the ordinary way. The work is one admirably adapted to the wants of the dental student, and will, we doubt not, receive from this class a meritorious consideration.

ART. XVIII.—*Chemistry and Metallurgy, as applied to the Study and Practice of Dental Surgery.* By A. SNOWDEN PIGGOT, M. D., late Professor of Anatomy and Physiology in the Washington University of Baltimore. With numerous Illustrations. Philadelphia: Lindsay & Blakiston, 1854, 8vo., pp. 516.

THAT a work like the above has, for a long time, been a desideratum in the practice of dentistry, does not admit of a doubt. To the student and practioner of the dental art, a knowledge of scientific chemistry is absolutely necessary to the successful practice of their profession, and at the present day no one can lay claims to eminence and respectability in mechanical dentistry, who depends upon empiricism for the successful results of his manipulations in the laboratory. It is not alone necessary that one should understand the behaviour of metals and other materials used in the workshop, but a full knowledge of the chemical principles involved in the organic changes originating in the mouth, under an almost infinite variety of conditions, is needful to the successful practice of dentistry.

The work before us, we perceive, has been prepared with reference alike to the wants of the student and the demands of the advanced workman in the performance of his daily duty. In the practical details of the work we observe precision, while, in those portions rela-

ting to animal chemistry, there is all that fulness of description necessary to a successful knowledge of its important bearings. We commend the work as worthy the attention of the practical dentist.

ART. XIX.—*A Treatise on the Diseases of the Eye.* By W. LAWRENCE, F.R.S., Surgeon to St. Bartholomew's Hospital, etc., etc. A new edition. Edited, with numerous Additions, and Two Hundred and Forty-three Illustrations, by ISAAC HAYS, M. D., Surgeon to Willis Hospital, etc., etc. Philadelphia: Blanchard & Lea, 1854, 8vo., pp. 948.

THIS is a new and enlarged edition of Mr. Lawrence's excellent work on the Diseases of the Eye. The editor, Dr. Hays, has made many valuable additions to portions of the work which had fallen into the back ground, from the advances in ophthalmic physiology, pathology, and therapeutics, since the issue of the former editions. It has always been considered a standard work, and may now be regarded as one of our most complete treatises on the diseases of the eye, and fully illustrating the most recent and improved views of authorities at home and abroad.

ART. XX.—*Elementary Chemistry, Theoretical and Practical.* By GEORGE FOWNES, F.R.S. Edited, with Additions, by ROBERT BRIDGES, M. D. A new American edition, from the last and revised London edition. With numerous Illustrations on Wood. Philadelphia: Blanchard & Lea, 1853, 8vo., pp. 555.

WE have here a new and revised edition of one of the best elementary works on Chemistry, accessible to the American and English student.

ART. XXI.—*The Medical Formulary; being a Collection of Prescriptions derived from the Writings and Practice of many of the most eminent Physicians in America and Europe.* By BENJAMIN ELLIS, M. D. Tenth edition, revised and much enlarged. By ROBERT THOMAS, M. D., Professor of Materia Medica and Pharmacy in the Philadelphia College of Pharmacy. Philadelphia: Blanchard & Lea, 1854, 8vo., pp. 296.

THE great popularity of this work renders any farther notice of it unnecessary, than the simple announcement of the publication of a new and *revised* edition.

ART. XXII.—*A Practical Treatise on Inflammation of the Uterus, its Cervix and Appendages, and on its Connection with Uterine Disease.* By JAMES HENRY BENNET, M. D., Member of the Royal College of Physicians, etc., etc. Fourth American, from the Third London edition. Philadelphia: Blanchard & Lea, 1853, 8vo., pp. 430.

THE fourth edition of Dr. Bennet's popular work on the diseases of

the Cervix Uteri has been carefully revised by the author, and improved by the addition of new matter. The former editions have now become so widely diffused by republication and translation into continental languages, that the approbation of the profession may be considered strongly pronounced in favor of the work as a practical treatise on the views which it sets forth.

ART. XXIII.—*Prize Essay on the Use and Abuse of Alcoholic Liquors, in Health and Disease.* By WILLIAM B. CARPENTER, M. D., F.R.S., author of the Principles of Phpsiology, etc. With a Preface, by D. F. CONDIE, M. D., author of a Practical Treatise on the Diseases of Children, etc. Philadelphia: Blanchard and Lea. 1853. 8vo. pp. 178.

THIS is a reprint of the essay, to which was awarded the prize of one hundred guineas in the latter part of the year 1849. The successful essayist proved to be Dr. Carpenter, the distinguished physiologist and writer. The essay is a truthful, candid, and scientific examination of the questions proposed by the donor of the prize; these are given in a former notice. The conclusions of Dr. Carpenter are decidedly against the use of alcoholic liquors except for medical purposes, and the array of facts which he adduces to sustain his positions is truly formidable. He entered upon this investigation unbiassed by any preconceived notions, but concludes it a firm and consistent advocate of total abstinence.

ART. XXIV.—*Human Anatomy, Physiology, and Hygiene.* By T. S. LAMBERT, M. D., Lecturer on Physiology at the Pittsfield Institute (for Young Ladies), Greenleaf's (Brooklyn), Rutger's Institute, (New-York), etc. Illustrated with nearly Three Hundred Woodcut and Lithographic Engravings. Hartford: Brockett, Hutchinson & Co. 1854. 8vo, pp. 456.

THE examination of this book for schools has given us much pleasure, and we do not hesitate to pronounce it admirably adapted to the necessities of the advanced pupil who is in the pursuit of that degree of anatomical and physiological science, without which no one can be considered educated. We are especially gratified with the endeavor of the author to give the latest and most approved views in anatomy and physiology, and heartily second the remark of the publishers that, "To use a book which is behind the times, or in any considerable degree inferior to what it may be made, is still worse for both scholar and teacher." Long experience in teaching the elementary principles of anatomy and physiology has peculiarly qualified the author to appreciate the wants of both teacher and pupil. The style is clear and perspicuous, and the arrangement of matter well calculated to give the learner clear views of each subject as it is presented. The work is fully illustrated with engravings, which will greatly facilitate the progress of the student, and aid him in acquiring just ideas of the structure and functions of various organs.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PATHOLOGY AND PRACTICAL MEDICINE.

On the Diagnosis of Uræmic Blindness and Dyspnœa, by W. H. Walshe, M. D.—I have recently seen, out of doors, a very striking example of uræmic blindness; one illustrating so plainly the occasional difficulties of its diagnosis, that I will avail myself of the particulars for the discussion of the general question.

Case.—On the 12th of November last, Mr. J. R. Wells brought me a patient of his under the following circumstances:—"Mr. ——, aged 29, widower, leading a steady and quiet life, has generally enjoyed good health. Ten years ago, he had a peculiar contraction of the right leg, the tendons feeling stiff in the ham. Three years ago, he was ill for a fortnight with sore throat. He has now been ill for upwards of two months. A fortnight ago, boils commenced to form about his body; one, above the left orbit was followed by great pain on the spot. All of these boils got well; he felt generally ill and depressed, but was improving, when, ten days ago, he found he could not see as usual; the left eye being decidedly the worse of the two. He had no cephalalgia, nor swelling of the face. Nov. 12th. *Present State.* (*a*) He looks depressed, somewhat stupid; has slept badly for last two nights, without bad dreams; spirits low; temper of late rather morose; inclined to talk to himself. (*b*) The skin is pale and sallow; he does not perspire; there is no skin affection of any kind; no distinct swelling about eyelids; he says they are stiff; no swelling of ankles. (*c*) The legs are weak, about equally so; if any difference, the left is the worse (*vide k*). (*d*) Tongue tolerably clean; bowels open from medicine; anorexia. (*e*) Resonance is good under clavicles; no chest symptoms. (*f*) Heart's action is rather too extensively felt; first sound at base and apex rather too clear and full; no murmur at heart (pulse 76); strong venous hum in neck. (*g*) No swollen lymphatic glands. (*h*) Urinary organs patient declares to be in good order; three years ago, however, he had hæmaturia, for which he knew no cause. (*k*) Moderate headache at vertex; no vertigo; no tinnitus; no peculiar sensations of any kind in head; intellect perfectly clear; some stiffness in joints of upper extremities, shoulders most,

right and left the same; he squeezes awkwardly with left hand, but about as forcibly as with right; no deviation of tongue; articulation quite distinct; no peculiar sensations in limbs. (*l*) No convulsive movements anywhere. (*m*) Pupils medium sized, round; contract immediately and gently well under light (merely that of the room); then expand a little; the action is not distinctly different on the two sides; no opacity in either eye; no amaurotic look; no photopsia; no muscæ; and no spontaneous pain in the eye-balls; no photophobia, but is pained, he thinks, by continuing the effort to see; he cannot distinguish moderate-sized objects at opposite side of the street; cannot read small print at all; sees better in morning when he gets up, and with strong light; has never had diplopia."

Here, then, was an anæmic person, suffering from boils (which were, as is well known, epidemic at the time), but caring neither for his anæmia, nor his boils, nor the general disturbance of health accompanying these, but solely anxious about the sudden and increasing failure of his sight. Were the eyes themselves diseased? No opacity could be discovered in either; membranes and humours appeared perfectly transparent. That the cornea, chambers, lens, and its capsule, were free from any change sufficient to explain the symptoms, was, in fact, unquestionable. Again, disease of the retina, producing blindness, if acute, would have been attended with local symptoms, weight and fulness in the eyeball, with throbbing pain, photopsia, change of color of the irides, etc., and with fever—conditions all of them wanting here. Chronic retinitis is attended with morbid sensibility to light, which our patient did not complain of. It is so infinitely unlikely that tumours connected with the deep-seated tissues of the eye should form simultaneously in both organs, that the idea of their existence here might, almost without examining the globes themselves, be rejected. Disease of the optic nerves, or their sheaths, enlarges the pupil, paralyses the iris, and very, very rarely attacks both sides simultaneously; it was, therefore, not the cause of the blindness here. Nor could the case be supposed one of idiopathic amaurosis. The eyes had not the amaurotic look nor expression; there was no lustre of their surface, no rolling or unsteady movements of the eyeballs, and none of the peculiar vacant gaze of that affection. This patient, on the contrary, directing the axes of the eyes appropriately, *looked as if he could see well.*

The least reflection on the condition of the patient's motor and intellectual faculties satisfies us that none of the ordinary affections of the brain could have existed here. Neither meningitis, simple or tuberculous, nor hæmorrhage, produces blindness of the type before us; and, though both acute and chronic softening do actually cause impairment of vision on one, or even on both sides, blindness never constitutes the prominent symptom it did here; besides, all other evidences of softening were deficient. But it was not so easy to exclude tumour of the encephalon. For not only has blindness, more or less complete, been a frequent symptom in cases of intra-cranial morbid growth, but actually, next to cephalalgia, their most, or nearly their most, frequent symptom. This is true of tumours of the cerebrum, cerebellum, pons,

and pituitary gland; a circumstance showing, by the bye, the vainness of the attempts to diagnosticate the seat of a cerebral tumour, solely through the perversion of special senses. It is true that there was no cephalalgia of note in this instance, but cephalalgia may be absent from first to last, even in protracted cases; and we might have been at the commencing period of the formation, at which period, there is every reason to believe, if not to be absolutely certain, the head is often free from pain. Intra-cranial tumour was, therefore, by possibility the cause of the failure of vision in this patient. But, again, there are cases on record, tending to show that injuries to the supra-orbitar nerve may produce obscurity of vision, nay, complete blindness. It is true that some observers hold that, in all such alleged cases, there has in point of fact been concussion of, or other injury to, the eyeball itself; but the weight of the evidence seems to me decidedly in favor of injury to the branch of the fifth nerve named sufficing to impair vision. Now the patient had had no traumatic mischief done to his eyebrows, it is certain; but he had had a boil there, the source of much pain and irritation; and it seemed an admissible hypothesis that the local inflammation might have acted the part of a wound in the spot. It is alleged that the nerve of one side only being implicated, the eye of the other has suffered by sympathy.

It was certain the patient had not been taking any of the drugs—belladonna, aconite, stramonium, etc.—which injure sight. Besides, the pupils were not dilated. Hæmic or blood-diseases (I use the adjective as more euphonious), are many of them, more or less constantly, attended with perverted vision. Now our patient was anæmic to a high degree; but I could not admit this to be the cause of his blindness; for though impairment and perversion of sight often attend this state, they never, as far as I know, do so to the extent observed here; they never constitute the prominent enduring symptom of the state. But anæmia might here be fairly taxed with increasing the blindness, though *essentially* otherwise caused. But however plausible it might have appeared to refer the imperfect sight either to encephalic tumour, or to implication of the frontal nerve, examination of the urine, a few days later, furnished a much more satisfactory clue to the symptom. The fluid was highly albuminous. We now ascertained from relatives that the daily amount was small (a fact previously denied by the patient). A few days later, the eyelids were distinctly, though very slightly, œdematous; the ankles remained free from dropsy throughout. The most active measures failed to produce any secretion from the skin, which continued to the last day dry and harsh.

Between this period and that of the patient's death, on the 29th of November, one or two circumstances occurred worthy of note. The hydrochloric acid test succeeded strikingly; the expired air gave thick opaque fumes; but in this instance, as in many we have seen in the wards together, the breath was of strongly urinous odour—a state quite as significant of uræmia, as an affirmative result by Frerichs's test. For several days before his decease, the patient had *uræmic dyspnœa*, as I would call it—a dyspnœa evidently depending on the morbid state of the blood: for there was no pulmonary nor cardiac

affection to explain it; the percussion sound was excellent everywhere; there was no rhonchus, no serious alteration of the respiration-sound, and no cardiac disease. The pulse-respiration ratio averaged during this time 3:1, both pulse and respiration being, absolutely speaking, very frequent, namely 120 and 40. But there was an amount of breathing distress materially greater than attends a respiration of forty per minute: to this the poisoned blood was the apparent clue. Now, remarkably enough, this patient remained, almost to the last moment, free from the more ordinary effects of uræmic poisoning. The brain and cord gave no sign of suffering; his intellect continued clear; there was neither delirium nor sopor; and convulsions did not occur. This dissection of the effects of the kind of poisoning in question is not uncommon; the brain and vision may alone be affected; or the vision, the functions of the spinal cord, and those of the brain may suffer simultaneously.—*Assoc. Med. Jour.*

Disorders of the Renal Secretion in Delirium Tremens, and in Injury of the Spinal Cord.—The *Montreal Medical Chronicle* condenses from the *Medical Times and Gazette* the following interesting observations of Dr. Bence Jones:

Delirium Tremens, a congestive disease, is occasionally seen here in fearful intensity. Its resemblance to the diseases previously noticed is most apparent in the presence of albumen in the urine, in the state of the kidney and in the tendency to epileptic convulsions. The following cases illustrate my observations on congestion of the kidney in delirium tremens:—

A man of 35, with delirium tremens, had not slept for three nights; two hours after admission, he had an epileptic fit; two days after, the urine had a sp. gr. of 1019.3, a trace of albumen and blood globules; fibrinous casts not clearly determined. After two more days of extreme violence he had two convulsive fits, in the last of which he died. *Post mortem*, both kidneys large; much congested on surfaces and lobular; capsules peeled off easily; on surface a few slight pits, as if from atrophy, but elsewhere quite smooth.

A man of 35, five days ill, with seventh attack of delirium tremens. On admission, passed 6 oz. of urine, deeply red, having traces of blood, albumen and fibrinous casts: sp. gr. 1018. He slowly recovered, urine being 1027.9 and free from albumen.

A man of 40, three days under a third or fourth attack of delirium tremens. After a most excited night, the morning urine was albuminous and abounded in urea and sulphates: sp. gr. 1037.8. Passed, later in the day, the albumen was increased sp. gr. 1041.2. He died next day. The kidneys were congested, the malpighian tufts full of blood; several small cysts in the cortex, but structure otherwise healthy.

Such cases might be mistaken for Bright's disease, and by repetition might induce it, but I have found that when the congestion subsided, the albumen disappeared without any treatment directed to the kid-

neys. When the renal congestion of delirium tremens, cholera and scarlet fever passes into inflammation, pus is rarely found in the urine. But there is another form of congestion—also from acute disease—affecting the ureter and bladder as well as the kidney, where the signs are more perceptible. Severe injury of the upper part of the spinal cord, usually causing death in twenty-one days, is truly an acute disease: laceration from fracture often causes great congestion and purulent urine, the degree, however, varies—the urine may be healthy and the kidneys but slightly congested; the urine simply purulent; urine purulent and alkalescent; as examples—

Of the first degree—A man of 35 fell across a piece of wood and broke the sixth and seventh cervical vertebræ. Completely paralysed below mammæ. Urine the day after admission, very acid and 1023.1; on the 3d, 8th, 9th, 16th and 18th days, also acid, and sp. gr. 1018, 1022, 1023, 1011, 1011. On the 21st day he died, the pulse getting slower and weaker and dyspnœa increasing. The cord, for one and a half inches, diffluent. Several ruptures, about two lines in depth, on front of right kidney, but no inflammation. Other kidney normal.—A man of 30 fell from a roof forty feet high, where he went when drunk to escape from imaginary thieves; sixth and seventh cervical vertebræ broke and the cord tore across: ten hours afterwards no urine in bladder; nineteen and a quarter hours after some urine drawn off, which was strongly acid and stayed so for seven days; sp. gr. 1012, and contained a few blood globules. He died twenty-two hours after the fall; great congestion of kidneys but none of lining of pelvis or ureters; bladder healthy and full of urine.

Of the second degree—when the urine is purulent and acid throughout. A man of 31 fell out of a cart and broke the first dorsal vertebra. On the fifth day paraplegia was complete and the urine was acid 1014.2. Sixth day urine acid, 1030.2, much urates, some cells like pus, with some blood. Seventh day as last. He died during the night of dyspnœa from pulmonary congestion—the lining of left kidney slightly inflamed, some semi-purulent fluid in the hilus; bladder rather full of urine, which, except slight turbidity, seemed healthy; mucous membrane natural.—A man of 48 fractured sixth and seventh cervical and the second and third dorsal vertebræ: twelve hours after, urine acid, 1019.4. Second day, highly acid, remaining so for seven days in June 1025.3. Third, acid, remaining so at least five days, 1027, deposited crystals of uric acid; had some albumen and pus cells. Fourth, 1024.1, acid, a trace of albumen, pus less distinct. Fifth, acid, 1027.8, some blood, pus doubtful. He died in the afternoon comatose: lining of pelvis of both kidneys very slightly congested; bladder healthy.

The preceding shows that the inflammation of the lining of the kidney precedes that of the bladder, and causes pus in the urine before the alkalescence appears, and the sp. gr. falls. The same sequence attends the cases of the third degree. A glazier, 39, broke the fourth and fifth cervical vertebræ: paraplegia complete. Fourth dry, urine acid, 1029.2. Sixth, acid, 1030.2, no pus, but great deposit of urates. Eighth, acid, 1022.0, thick from urates; no pus, no albumen. Ninth,

less acid, 1007.3; a little pus. Tenth, very full of pus, 1010.8; neutral, ropy in sixteen hours. Eleventh, alkaline, much pus, too decomposed to take the sp. gr.: continued so till the 22d day, when he died. For the last six days much diarrhœa. The lining of the ileum for two feet intensely vascular and dark; in its submucous areolar tissue a few small ecchymoses; free surface covered by a dark red or almost black tenacious mucus. Intestinal glands healthy. Left kidney very vascular and studded with small abscesses. Infundibula pelvis and beginning of ureter very vascular and distended with pus. Right kidney also vascular, but less than left. Bladder held much pus and highly vascular. In the next case the pus appeared much earlier in the urine. A laborer, 35, broke the eleventh dorsal vertebra, and was completely paralysed. Second day, urine slightly acid, 1029.2. Fifth, acid, and remaining so for four days, 1025.3. Sixth, slightly alkaline, mixed with blood and pus. Seventh, highly ammoniacal, 1022.8, ropy mucus. Thirteenth, extremely foul, 1007.8. He died on the thirty-eighth day. Both kidneys smooth but soft; much congested; lining of calices, infundibula and pelvis of left kidney very much congested, and in several places thickly covered with lymph. No such appearances in left kidney, but urine squeezed from it was puriform and alkaline; some of its mammary eminences much congested. Bladder slightly thickened, and muscular coat fasciculated; mucous membrane slightly congested in patches and highly ulcerated. A false passage between prostatic urethra, and a large and very foul abscess between the bladder and rectum.

It may be concluded, 1st. That injury of the cord does not immediately affect the renal secretion; and 2ndly. That inflammation of the mucous membrane precedes and probably causes ammoniacal urine. The effect of the inflammation upon the density of the urine is instructive, as in Bright's disease the same low density usually occurs. In none of the cases I have seen has the temperature been increased, though this occasionally occurs, as in Sir B. Brodie's case of a man who had a severe spinal accident, and died in twenty-two hours. At last there were but five or six inspirations a minute, and yet his groin was 111°. From Bernard and Budge's experiments, it is probable that there is only increase of heat when the sympathetic nerve is injured, and that when the cord alone is injured the heat falls. Sequard refers the phenomena of injury to the sympathetic, to paralysis or dilatation of the vessels. The blood, finding a larger way than usual, arrives in greater quantity, and hence nutrition is accelerated.

I have but little to say upon treatment. In delirium tremens the congestion may be from the action of alcohol in the blood on the kidneys, or more often from the stimulation of the heart and bloodvessels. I have never cupped, but have allayed the excitement and quieted the circulation by opium, and thus got urine free of its blood. In injury of the cord, congestion results from paralysis of the capillaries. We judge of what goes on from analogous states of the eye that are visible. In paralysis of the ophthalmic nerve, the conjunctiva is often vascular, and gets more or less actively inflamed. So also from section of the pneumogastric, congestion first and inflammation next of the

lining of the bronchi and stomach, results. In injury of the cord there is the same tendency to congestion of the mucous membrane and skin. In one case most marked in the kidneys, in another in the bladder, and in another in the intestines. As the injury is irreparable, so the effects can only be palliated. The putrefying urine must be drawn off at least twice daily, so that its irritation may not add to the cystitis. Injection of warm water is sometimes useful, but sedulously avoid the the slightest mechanical injury which would aggragate the symptoms."

Conclusions drawn from the Results of Re-vaccination of 257 Cases. By W. Bird Herapath, M. D., of Bristol.

The inferences to be deduced from a consideration of these experiments are the following:—

I. That three cases re-vaccinated within seven years were not again susceptible to vaccine.

II. That vaccine, after the interval of from eight to seventeen years, does not prevent the reception of vaccine again, except in 22·174 per cent.

III. That the distinctness or imperfection of the vaccine cicatrix does not materially alter these results.

IV. That variola does not prevent the formation of the vaccine vesicle, except in about 23·53 per cent.

V. That the occurrence of small-pox subsequently to vaccination does not destroy the susceptibility of the human system to again receive the vaccine poison, except in about 10 per cent.

VI. That in all the previous cases, whenever the secondary vaccine vesicle assumed its perfect form, its subsequent history was the same as if the system had not previously labored under vaccine variola or varioloid.

VII. It is probable that the protective influence of vaccination has diminished in consequence of repeated transmission of the vaccine matter through the human body.

VIII. It is desirable that re-vaccination should be extensively followed, as one means of giving additional protection to the masses.

IX. That when possible, the stock of vaccine should be renewed by going back to the original source.—*Assoc. Med. Jour.*

Treatment of Tetanus.—Dr. Lawrie gives (*Glasgow Med. Jour.*), the statistics of this disease with the following conclusions as the result of his investigations into the success of different methods of treatment. —"It may be asked if, as the preceding summary would appear to show, no remedy yet tried has done good, and many have done harm, how are we to treat tetanus? I reply, negatively; put the patient into a dark room, keep him absolutely quiet, don't torture him with remedies proven to be useless, give him as much nourishment as he can swallow, and trust the result to the powers of his constitution. If the spasms are severe, alleviate them by chloroform. Still, I do not

despair that a remedy will be found, if not adequate to cure the disease, yet powerful enough to enable us to "fight against death," until the chronic stage is established, and the result can with some confidence be intrusted to nature. Such a remedy I would look for among the anæsthetics. The discovery by Mr. Richardson of the virtues of the Lycoperdon Proteus, encourages the hope that many substances in the vegetable and mineral worlds will yet be found, possessed of powers analogous to those of chloroform, but so far different as to make them curative in cases in which that wondrous agent is only palliative, if not at times injurious. Unfortunately, chloroform excites tetanic spasms, and interferes with and arrests respiration and circulation. Shall we ever discover a remedy which will relax and never excite spasm, and continuously deaden pain without causing pulmonary or cardiac congestion? When we do, I shall hope that tetanus may be cured.

In the mean time, as an encouragement to lay aside medicine and trust to nature and mild nourishment, I shall shortly relate the following case: — aged 12, October 8th, 1853, was amusing himself with some of his companions shouting at a marriage party. The bridegroom being irritated, threw a collier's boot among his tormentors, the heel of which struck this boy on the face. The skin was not wounded, but the bones of the nose were broken, and on the 13th, there were partially replaced by my friend, Mr. Tindal. On the 22d, fourteen days after the accident, and nine after replacement of the bones, tetanic symptoms appeared. I saw him on the 23d with Mr. Tindal; and found the pulse from 115 to 120, the lower jaw, face, and neck rigid, abdomen tense, with acute diaphragmatic pain. Purgatives, followed by small doses of Dover's powder, had been given. I proposed that the opiate should be omitted, that the violence of the spasms should be met by inhaling chloroform, and that infusion of digitalis should be freely given. The chloroform acted well, but he struggled against it, and did not like it; of the digitalis he had four ounces, and then refused to take more; purgatives would not act. Under these circumstances, at our visit on the 28th, we agreed to lay aside all medicine, to open the bowels by occasional enemata, to keep him quiet and give him as much milk as he chose to swallow. To avoid multiplying details, it is sufficient to say that for eight days the paroxysms recurred with great severity every twelve or sixteen hours, at times almost threatening immediate death; he had a troublesome cough with considerable expectoration, but otherwise he breathed easily, and swallowed well. He constantly kept a small wedge of wood between his teeth, notwithstanding which, the spasms of the lower jaw were so severe as to force out four of the incisors. He drank milk freely and without difficulty through a quill. He is now quite well. Cured by milk!

Change of Sight as Premonitory of Hard Cataract.—Mr. White Cooper (*Assoc. Med. Jour.*) differs from Mr. Ware and M. Sichel, in the explanation of the recovery of sight in those who have been presbyopic. Mr. Ware attributed the change to absorption of the vitreous

humor, which allows the sides of the sclerotica to be pressed inward by the action of the muscles, the effect being to lengthen the axis of the eye, by which the aberration becomes corrected. M. Sichel believes there is in reality a shortening of the visual focus, caused by the use of too strong convex glasses. Mr. Cooper thus states his conclusion in regard to this interesting phenomenon :—

I have recently had the opportunity of studying four cases of this description, and have quite satisfied myself that, in them at least, the change from presbyopic to myopic sight was premonitory of hard cataract. I have observed that myopic persons, who become affected with cataract, increase the power of their glasses to the very highest numbers, even to No. 14. It is often considered that the need of higher and higher glasses under these circumstances is a delusion, and that the mere fact of the vision becoming more and more imperfect leads the patient to seek increased assistance in stronger glasses; yet, as the highest concave glasses diminish objects to almost miscroscopic minuteness, it was difficult to believe that they really afforded assistance. Observation has, however, led me to believe that the assistance was not imaginary; and the reason is probably this. In all cases of hard lenticular cataract, the crystalline lens becomes closer and denser in structure, and generally rather flattened in shape; but the flattening is in some cases less in proportion than the increase of density. By this increase of density, the refractive power is altered, and consequently the focal distance is shortened; so that a myopic eye, which formerly derived sufficient assistance from lenses Nos. 6 or 8, needs Nos. 12 or 14 for reading, or seeing moderately distant objects. To an analogous change I refer many of those singular cases in which old persons lay aside their convex presbyopic glasses, being able to do without them, or find themselves under the necessity of using concave or myopic glasses. The increase in density may be sufficient to counteract the changes which had previously diminished the refractive power, and to restore to the eye its natural focal distance; or it may go a little further, and cause the image to be formed in front of the retina as in near-sighted persons. Such a change in the density is not necessarily attended with so much diminution of the transparency of the lens as to materially interfere with vision, though I believe the sight is always a little impaired, which the patient properly sets down to the account of old age; but, in many cases, the change goes on; the lens becomes shrunken and amber colored; and the patient is sooner or later pronounced to have hard cataract.

The characteristics of the cases which I have seen have been these. A person, about the middle period of life, has taken to glasses, which have been increased in power as years rolled on. He has numbered perhaps seventy summers, when he finds the high powers less agreeable than the lower, which are resumed; but, after a time, they too, strain the eyes. Perhaps glasses are altogether laid aside, and the fortunate individual receives the congratulations of his friends on his renewed juvenility. In some cases, the sight is far from clear, and objects are held near the eyes to be discerned; accidentally, perhaps, he looks through a concave glass of low power, and is agreeably surprised

at finding his sight improved. As these symptoms occur in advanced life, the persons may die before other phenomena present themselves, and the true nature of the case may never be discovered. But if the parties live, the sight, sooner or later, becomes little by little obscured, and the characteristic symptoms of hard lenticular cataract are established.

New Method of Administering Sulphate of Quinine.—In the *Revue Médico-Chirurgicale*, for September, 1853, we find a notice of an article by Dr. BERTELLA, on a new method of administering sulphate of quinine. This plan consists in combining with the quinine an equal quantity of tartaric acid, which has the effect of not decomposing the salt, but of rendering it more soluble, and of causing absorption to take place more readily. He gives at a dose three grains of disulphate of quinine, and three of tartaric acid. The dose at the commencement is from six to twelve grains of each.—*Assoc. Med. Jour.*

Fungoid Parasites of the Skin.—C. Meissner has described, in the *Archiv fur Phys. Heilk.* 12, 193, a new fungus, which he observed in the *finger-nails* of an old man. The nails were very thick, curved, yellowish white, and streaked; and, on examining them carefully under the microscope, they were found to be full of a rich plexus of variously convoluted filamentary fungi, which in many places formed a thick felt among the cells of the nail-substance. The toe-nails were unaffected.

When asked respecting the nails and the cause of their alteration, the old man stated that about thirty years previously a heavy weight had fallen upon his fingers, in consequence of which the nails were broken, and had come off; that they subsequently grew again, but had gradually become thick and white.

The last number of the *British and Foreign Medico-Chirurgical Review* contains an interesting review of M. ROBIN'S *Natural History of the Vegetable Parasites which infest the Bodies of Animals*, in which mention is made of about two dozen of these organisms as occasionally found on the human body. We think that, for practical purposes, it will be enough to notice the following fungoid denizens of the skin.

1. In the true favus, well known by its yellow crusts, we have the now familiar *achorion Schonleinii*, the tubes and spores of which are found in the hair follicles surrounding the root of the hair, and passing out on the surface of the skin, where they form the familiar favous crusts of this 'porrigo scutulata.'

2. In ringworm of the scalp, or trichosis furfuracea (Wilson) we have the *trichophyton tonsurans*. The disease is distinguished by the bald patches being rough with the swollen and brittle stumps of the diseased and broken-off hairs; and the fungus, consisting of oval transparent spores and articulated filaments, is seated in the *interior* of the roots of the hairs. 'The hairs and fungi simultaneously increase; the

former seem larger than usual, are paler in color, lose their elasticity, soften and break off when they have risen some one or two lines above the surface of the scalp; in the short cylinder then left the fungus grows still more rapidly, so that the normal structure of the small stump of hair soon becomes indistinguishable. Sometimes the hair breaks off before emerging from the skin, and the fungus, epidermis, and sebaceous matter, fill the ends of the piliferous conduits, and form the little prominences which can be seen by the naked eye in this disease, and give the skin a rough anserine appearance. The sporules and mycelium of the plant can sometimes be seen in the form of a white powder, on the roots of the broken hairs.'

3. In porrigo decalvans, or alopecia circumscripta, is found the *microsporon Audouinii*, distinguished by its numerous waved filaments, and the extremely small size of its sporules. It is not found, like the Trichophyton, in the interior of the root, but forms round each hair a little tube; the hair then becomes opaque, softens, and breaks off. The alopecia is rapid, the dermis is not congested, and the epidermis is thin and smooth.

4. In mentagra grows a plant resembling the preceding, but possessing larger spores and filaments, ycleped the *microsporon mentagraphyta*. Its seat is between the bulb of the hair and the follicle in which the bulb is seated; and it never extends beyond the surface of the skin.

5. The brown scurf of the disease called pityriasis versicolor, or chloasma, is formed by another cryptogamic plant, the *microsporon furfur*.

The essential point in the treatment of all these diseases is to destroy the vitality of the parasite, by means which are pretty equally applicable to all of them. If hairs be present, as in most of the maladies above described, they must be removed by extraction, with or without previous application of some of the usual depilatory ointments; and then some 'parasiticide' solution or ointment must be applied and rubbed into the skin, so as to reach the fungi in the recesses of the follicles. A solution of corrosive sublimate, two grains to the ounce; an ointment of acetate of copper, one grain to the ounce; and, above all, the saturated aqueous solution of sulphurous acid gas, diluted with two or three parts of water, may be used for this end. In cases of mentagra, we have found an ointment of sulphate of iron, ʒss to the ounce, completely effectual in curing the disease. There are no doubt many other substances which have a similar good effect; but a caustic such as nitrate of silver, which, by forming a crust on the surface, rather protects the fungus than destroys it, will not succeed.—*Assoc. Med. Jour.*

SURGERY.

Observations on the Excision of Ovarian Tumors. By John Erichsen, Esq., Prof. of Surgery in University College, London.—In considering the subject of ovariotomy, two questions present them-

selves. 1. As to whether the operation is a sound one, and ought to be retained in practice; and 2. If retained, in what class of cases it should be had recourse to?

In answering the first question, we must refer to the course that is taken by ovarian tumors, and to the result of the operation as deduced from published cases.

The course taken by ovarian tumors necessarily varies greatly. In some instances, these growths do not appear to be incompatible with prolonged existence and a fair share of health. In other instances, again, after remaining quiescent for some length of time, they assume considerable activity of development, and interfere so seriously with the other abdominal organs and with the general operations of the economy, that life is attended by great misery and discomfort; and in a third class of cases they rapidly and steadily run their course to an unfavorable termination.

After a time, in the majority of instances, the tumor may be materially lessened in bulk by tapping; but when once this operation has been had recourse to, it will require to be repeated with increased frequency, the intervals between each succeeding tapping being diminished; and then a fatal termination at a comparatively early date may usually be looked for. Mr. S. Lee states that of forty-six patients who were tapped, thirty-seven died, and only nine recovered; and that of the thirty-seven who died, more than one-half did so in four months from the first tapping, twenty-seven out of the thirty-seven in the first twelve months, and of these eighteen were only tapped once.

The objection has been raised against ovariotomy, that the mortality from it was so high as not to justify a surgeon in performing it. Undoubtedly, a very high rate of mortality after an operation would constitute a serious bar to its performance; and the more so, if it could be shown that the disease for which it was practised was not a necessarily fatal or even a very serious one. Thus, Mr. Phillips has collected the particulars of 61 cases in which ovarian tumors were extracted: of these, 35 were successful, and 26 died. Mr. Lee gives 90 cases; of these, 57 recovered, and 33 died; and Dr. Robert Lee, the most recent writer on the subject, has collected 102 cases of ovarian extraction, of which sixty did well, and 42 terminated fatally. From these statistics, it would appear that the mortality after the removal of ovarian tumors, amounted to rather more than one in every three cases. This rate appears to me not to be excessive, when we compare it with the result of operations for various severe surgical injuries or diseases.

The next question that occurs in connection with ovariotomy is as to the class of cases in which it should be practised. Now here we come upon ground in which much difference of opinion must necessarily exist. Ought ovariotomy to be performed in all cases, or even in the majority of instances of ovarian disease, or ought it to be limited to a few and exceptional cases, and practised as a last resource?

The most ardent advocate for this operation will scarcely, I think, advise that an attempt should be made to extract the ovarium from every woman laboring under tumor of this structure; but would rather

recommend the employment of palliative treatment, until the growth had begun to interfere seriously with the comfort of existence, or with the healthy action of the abdominal organs. When these injurious effects of pressure have once fairly begun to manifest themselves, the patient wasting, suffering much discomfort from her size, with difficulty in breathing, repeated vomiting, gastric irritation, etc., then the question of relief by operation will necessarily obtrude itself, and must be discussed dispassionately and without prejudice. Under these circumstances, I confess I see no chance of giving the patient relief, or of prolonging her existence, except by the removal of the tumor. Medical treatment is of no avail in such cases, and tapping only gives temporary relief, and will eventually, and often very speedily, wear out or destroy the patient. Under such circumstances, therefore, we must either leave the patient to her fate, or have recourse to the ablation of the tumor, which, it has already been shown, may be done with the prospect of success in nearly two cases out of every three.

So far then as the strictly *surgical* aspect of this question is concerned, I should say that as the recoveries after this operation amount to at least 60 per cent., it is proper for the surgeon to propose and to perform it when all other means of relief have failed, and when the patient's health is giving way under the extension of the disease.

There is one aspect under which we have not as yet considered this matter, and which has a most important bearing on the operation. I mean in its *diagnostic* point of view. This, which may with justice be termed the *medical* part of the question, and may be considered as belonging rather to the province of the physician than to that of the surgeon, has to be considered in two of its bearings: 1. As to the existence of such adhesions between the enlarged ovarium and the other abdominal organs, as to render the extraction impossible; and 2. The diagnosis between ovarian and other abdominal tumors.

The existence of such adhesions between the ovarian tumor and the abdominal viscera, as will prevent the possibility of its extraction, is of frequent occurrence, having been met with in rather more than one third of the whole number of cases operated on; according to Dr. Lee, in 60 out of 162 cases. The frequency of the occurrence of this complication renders its diagnosis one of extreme importance. Its existence may in general be *suspected*, when it is ascertained that the patient has been the subject of attacks of peritonitis, when the abdominal tumor does not appear to change its position on the patient taking a deep inspiration, and then expiring freely; and when, on the patient's raising herself into the sitting posture, the sac does not tend to move forward into the space between the recti muscles. So also much light may be thrown upon this important point by ascertaining the existence of a crepitant or crackling sensation between the anterior abdominal wall and the tumor, and more particularly, if, when the tumor is tapped, it draws down over it the abdominal parietes, or sinks into the pelvis without exercising any traction on those parts. The condition also of the pelvic viscera—viz., the bladder and uterus—as ascertained by examination with the sound, may tend to show whether connexions exist in this quarter or not.

By such examinations as these, the presence of adhesion may doubtless in many cases be suspected; but in other instances, and more particularly when the mass is bound down posteriorly, there is no possibility of determining this point, and then the surgeon may, to his great annoyance, find that after laying open the abdomen, the operation cannot be completed, and the tumor requires to be left. In those cases in which there is any reason to suspect the presence of adhesions, it is, I think, a wise precaution to make a small exploratory incision into the abdomen, through which the fingers or hand may be introduced, and the connexions of the tumor examined. If these are too extensive to admit of removal, the aperture may be closed, and possibly the patient may escape without any very serious consequences ensuing; as in these cases the peritoneum has in a great measure lost its character as a serous membrane, and is not so susceptible of the diffuse and destructive forms of inflammation that would otherwise be likely to occur in it.

The diagnosis of ovarian from other abdominal tumors, falls so entirely in the province of the physician, that I do not feel myself prepared to enter upon it; but would prefer leaving that point to be elucidated by those members of the Society who have paid special attention to this subject.—*Assoc. Med. Jour.*

On the Reduction of Luxations of the Extremities when complicated with Fracture. By M. Richet. (*Bulletin de Therap.*) M. Richet relates, in great detail the case of a man, æt. 68, in whom a dislocation of the upper end of the humerus was complicated with fracture of the anatomical neck of the bone. Four days after the occurrence of the accident, he was placed under the influence of chloroform, and the reduction of the dislocation was easily effected by pressing backwards the head of the bone, without any traction being resorted to. The fracture was afterwards adjusted and consolidated; and when the patient was seen a year after, he had recovered the complete use of his limb.

M. Richet reviews the opinions of the classic writers, who agree in pronouncing the impossibility of reducing a dislocation of the humerus or femur, until after the fracture complicating it has become united. He shows the great power chloroform confers upon us in these cases, by the complete relaxation of the muscular resistance it produces, and the care with which the head of the bone may, by due manipulation, be forced back into its socket. He thinks the passive obstruction offered by the fibrous tissues of the parts has been exaggerated and ill-understood. In numerous autopsies he has made after recent dislocations, produced accidentally or experimentally, he has always found the aperture in the capsule broad and irregular, and in no condition to offer an obstacle to reduction. He does not deny that such obstacles may occasionally be offered by the fibrous structures, independently of the aperture of the capsule; but he maintains, from clinical and experimental observation, that such obstacles are much more easily overcome by pressing the head backwards than by the usual practice of

traction of the limb, which, indeed, only aggravates them. By the aid of chloroform, he believes a dislocation of the humerus into the axilla may thus always be reduced by pressing the head directly backwards. In several experiments that he has made, in which the head of the femur has been dislocated, and the bone then sawn through just below it, so as to simulate dislocation complicated by fracture, the reduction has also been easily effected by direct pressure.—*Monthly Journal.*

On the Cause and Treatnent of Prolapsus of the Rectum. By M. Duchaussay. *Archives Générales de Med.* In a short but interesting memoir, M. Duchaussay reviews the circumstances attending this troublesome complaint, and fixes attention in particular upon the loss of power in the sphincter ani muscle as the chief cause of the descent of the bowel. Moreover, he endeavours to show that Dupuytren's operation, by excising the radiating folds of skin around the anus, and the operation by four touches with the actual cautery, practised by Guersant, act not by causing any subsequent retraction of the cellular tissue, skin, and mucous membrane, but rather by stimulating the sphincter muscle, so that it regains its contractility, and therefore its retentive character. How else, asks M. Duchaussay, do we explain the fact, that the prolapsus is often cured, or does not return after two days, or even after one day, or not at all, after the operation? He points out the fact, that in cases of this disease in infants, three fingers may sometimes be introduced without causing contraction of the sphincter, before the operation by cautery, whilst afterwards, if one be passed, a powerful contraction of the sphincter immediately ensues. As proof that this recovery of contractile power by the sphincter is the cause of cure, a case is mentioned in which M. Guersant had used the cautery too superficially, the sphincter failed to contract, and the disease returned. A second cauterization was followed, on the contrary, by return of the mucular contractility, and the cure was complete.

According to the author, the cautery acts as a stimulant to the paralyzed muscle, just as it will to the deltoid in a like condition. After pointing out the inconveniences and apparent severity of M. Guersant's method, M. Duchaussay suggests that a slighter cautery, or some other stimulant to muscular contractility, might act as well, and he suggests strychnine. This, with M. Guersant's permission, has been tried in the Hôpital des Enfants, in the case of a girl aged eleven years. The prolapsus here arose from obstinate constipation; it had lasted for four years; the bowel protruded at each evacuation about ten centimeters (=4 inches). During the first month of her admission she was treated by laxatives only, with no other result than that of diminishing the length of the protruded portion of bowel to about four centimeters (1½ inches). Strychnia was then employed endermically near the region of the sphincter; the next day there was no evacuation; on the following day the bowels acted once, only a slight bulging of the rectum taking place; on the third day the protrusion was still less after an ordinary evacuation; and during the next thirteen days it did not occur again.

Blisters were made in the cleft between the nates, and on the right thigh close to that cleft; one sixth of a grain of strychnia was applied the first day, one third on the second, and one third on the fourth day. On the fifth day, about half a grain of sulphate of strychnia was used, and this was repeated for the last time on the sixth day. In the case of a boy, it is recommended to be applied between the scrotum and anus, immediately over the anterior interlacement of the sphincter ani fibres. The remedy certainly deserves further trial.

Advantages of the Starched Apparatus in the Treatment of Fractures and Diseased Joints. By. J. S. Gamjee, Esq. The following notice of Mr. Gamjee's essay, for which the Council of University College have awarded the Liston Clinical Medal, we copy from the *Brit. & For. Med. Chir. Rev.*

This is a practical work, intended to show the beneficial effects of the treatment of fractures by the starched apparatus, as employed of late years by M. Seutin. This apparatus is very simple: splints are made from pasteboard soaked in water, and are then covered, both inside and out, with a thick coating of starch; the limb is bandaged with a roller covered with wet starch, and the splints are then moulded on the limb, all depressions and tuberosities in which are filled or protected with cotton-wool. An outer bandage, also covered with starch, is then applied, any the limb is kept quiet until the whole is dry, which occurs in about 36 hours. When dry, the bandages are slit up in order to see that the application of the splints has been properly performed, and if any swelling of the limb requires a little loosening of the bandage, or if any shrinking of the bandage requires a little tightening. This being done, a bandage starched on the outside is reapplied, and after this has dried, the patient may leave his bed. The great advantages of this plan are, that uniform pressure is applied, reduction is maintained, and confinement to bed for a long period (as common in fractures of the leg, thigh, and femoral neck, treated on other plans) becomes unnecessary. Mr. Gamjee also states that swelling from extravasation of blood, or from inflammation, need not prevent the application of the apparatus if it be judiciously used; and that if the fracture is a compound one, the only difference of treatment is that the wound may be left uncovered by cutting a piece out of the splint. In support of these assertions, 17 cases treated in University College Hospital are related, and some judicious remarks are attached to each. Without going into their analysis, or into the details of the manipulation required for each particular fracture, we may observe that the evidence, as far as it goes, is satisfactory.

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Statistics of Yellow Fever in Philadelphia in 1853. By WILSON JEWELL, M.D.—The whole number of cases registered from July 19 (when the first case occurred), to October 7, the date of the last case, a period of two months and nineteen days, has reached the total of 170.

An examination of the records of the Board of Health will show that the cases reported were not, in every instance, under the name of yellow fever; the greater part of them have been designated as malignant bilious, malignant, pernicious, typhus icterodes, &c.

The deaths have been 128, equivalent to 1 in every 1.42 hundredths, or 75 per cent. of the whole. A fearful mortality. Had every case that wore the aspect of a malignant type of fever been recorded, the list of cases would have been increased, while the percentage of deaths would have presented a more favorable appearance.

Of the 170 cases, 147 may be traced directly to the infected locality, or its immediate vicinity. Twenty-two are of doubtful or unknown origin; while, in one instance, that of Matthias Pettigrew, the disease was contracted at the Lazaretto station, where he had been at work on board the ship Caledonia Brander, from New-Orleans.*

One hundred and eighteen of all the cases reported were treated in private practice; twenty-four at the Pennsylvania Hospital; eighteen at the Blockley Hospital; seven at the Bush Hill, or City Hospital; and three at St. Joseph's, on Green Hill.

In no instance can it be shown that the disease has spread from those laboring under the fever. At the Pennsylvania Hospital, the yellow fever cases were intermixed in wards with numerous other patients, some ill, and others convalescing from disease, but not an individual, either among the patients, nurses, or visitors, contracted the fever. The like immunity was observed with the cases treated in the Blockley, St. Joseph's, and Bush Hill Hospitals. In private practice, although numerous cases were attended away from the infected portion

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* This vessel had yellow fever on board when she arrived.

of the city, we have yet to learn that the disease, in a single instance, was propagated from the sick to the well, although there was an unrestrained intercourse between the patients and their immediate friends.

Ninety of all the cases were accompanied with black vomit; equal to 53 per cent. Of these, all died except four, viz., John Reehil, aged 20; Ellen Parr, aged 20; Mrs. Lindsay, aged 28; and James Sweeny, aged 12. The genuineness of the discharge in Ellen Parr's case has been doubted, as stated in a former communication. As black vomit has generally been considered to be a fatal symptom in yellow fever, we should always have some hesitation in relying upon the evidence of recovery after it has occurred, however high the authority from which the statement comes, unless the matter has been carefully submitted to the field of the microscope, and blood corpuscles found therein.

The sexes suffered nearly alike from the effects of the fever; the preponderance, however, being on the side of the males. Ninety-three of the cases on record were males, and seventy-seven were females.

A large proportion of those attacked were foreigners, viz., 102. Of these, 62 were born in Ireland, 19 in Germany, 18 in England, 1 in Scotland, 1 in France, and 1 in Spain. The remainder (68) were natives of the United States.

The colored population appear to have been specially exempt from the disease. We have not on record a single case, nor could we learn of any black person having had the fever. This supposed immunity of the colored race from attacks of yellow fever has been elsewhere observed; but in the fever of 1793, in this city, Dr. Rush says, "they took the disease in common with the white people."*

The duration of the attack in those who died was from two to twenty-four days. The mean was a fraction less than six days.

But few children appear to have had the disease. Under ten years of age there were only six. One of these, Rudolph Westhold, was but three weeks old. This child survived until the twenty-fourth day. Its father died on the sixth, and its mother on the fourth day of their disease. Another child, aged nine years, of the same family, recovered. William Hawkesworth, aged four months, died after one day's illness. It had nursed its mother until within two days of her death, she having died of the fever, at the Pennsylvania Hospital, on the sixth day of her attack.—*Quar. Sum. of Trans. of Col. Phy.*

On some Effects consequent on the Administration of Iodide of Potassium. By JOHN O'RIELLY, M. D. (*N. Y. Med. Gaz.*)—In August, 1850, I was called to visit Mr. H. E., aged twenty-nine, married; has a son two years old; has never had the venereal disease, or never took mercury to his knowledge; has been troubled for some time with chronic rheumatism, and has been ordered to take Hydriodate of Potash for its cure. Having taken the medicine for some days, he was attacked with symptoms of fever, and an eruption soon presented itself

* Rush's Works, vol. iii., p. 151.

on his face, and subsequently all over his body. Maculæ first, of a dark red color, came out, which gradually got darker, until the spots resembled *purpura;* the cuticle next became raised over some of the spots, and was filled with a fluid of a purple color, constituting large bullæ an inch in diameter. On the cuticle giving way, the true skin was found sphacelated underneath; the patient was profusely salivated —his tongue was swollen, his frame was greatly debilitated, and nervous irritation harassed him very much. The case being an anomalous one, myself, the late Dr. Caldwell, and my learned and talented friend, Dr. Power, were requested to see it—and the truth is, it puzzled us. The patient's life seemed to be in imminent danger at the time, and although we were not perfectly satisfied as to the nature of the distemper, yet we adopted the proper treatment. The patient was directed to take strong broths, porter, milk punch, compound infusion of roses, with quinine, camphor combined with opium; and after the expiration of a month, he was convalescent, with the exception of the ulcers, which were healed in the usual way, and the patient was enabled to resume his business.

On the 15th April, 1853, I was called to visit Mr. J. D., aged twenty-three; a clerk; married; has one child eighteen months old; has had syphilis previous to his marriage, for which he had taken mercury; has been addicted to habits of intemperance; has practised *masturbation* since his marriage; has been subject to attacks of rheumatism, for which he has taken Hydriodate of Potash; in the present attack has had a physician attending to him for nine days, who prescribed Hydriodate of Potash for him; states that in consequence of his medical attendant going to the country, he was obliged to send for me, on account of an eruption which suddenly broke out after a slight attack of fever. The patient at this time presented a most grotesque appearance, looking more like a leopard than a man; he was all mottled over with spots—those on his face were purple, whilst those on the lower extremities were of a dark red color; it will be remembered the spots on the legs came out last. There were two large bullæ on the forehead, one on the lip, two under the left clavicle, two on the inside of the right thigh, one on the side of the prepuce. The patient was profusely salivated, notwithstanding he had taken no mercury lately. After the lapse of a few days, the patient getting worse, and his life being menaced, Professor Mott was called in consultation, who declared, in the whole course of his vast experience, he never saw so bad a case. At this time the prepuce corresponding to the site of the bullæ had sphacelated, and the integuments of the penis, as far as the pubis, were involved in mischief. Mortification had also seized on the lip, and the other parts specified as having bullæ. The patient emitted a most abominable smell from his person; his mind was incoherent, his pulse was quick and small, the vital powers were prostrated to the lowest degree, every moment seemed about to snap the thread of his earthly career. Notwithstanding this terrific state of things, I ventured to predict the patient would survive, having arrived at the conclusion that it was similar to the former case; and fortunately my anticipations proved to be well formed The

same treatment was fully carried out; the patient rallied, the eruption disappeared—first from the face, and afterwards from the lower extremities. The sphacelated parts were thrown off, *including the whole penis*, body and integuments, from the pubis, not leaving a vestige of it behind for any useful or sinister purpose. The patient is now in excellent health and spirits, fully contented, and not fretted at the loss he incurred.

Formulæ for Styptic Balsam. By JAMES WARREN, M. D.—It is nearly thirty years since I commenced the use of this balsam as a styptic, in the various forms of hemorrhage which are within the domain of medical pathology, and with uniform success. I am satisfied that no remedy now known exerts a more specific power and more speedy relief, especially in hemoptisis, hematemesis, epistaxis, and menorrhagia. It acts both by its sedative power, in diminishing the force of the circulation, and by its astringent qualities, in contact with the bleeding vessels. In the treatment of hemorrhage, neither bloodletting, confinement to the room, suppression of the voice, relaxation from business, nor other precautions are necessary; nor is any auxiliary treatment required, except, perhaps, a dose of Epsom salts, where there is evidence that blood has been swallowed.

Ordinary exercise in the open air is decidedly preferable to inaction; and wherever there are premonitory symptoms of a return of hemorrhage, it has always exerted a prophylactic power when promptly used; and by this early resort to the remedy, many radical cures have been effected.

The following is the formula and the method of using it:

℞ Acid. Sulphuric. (by weight), ʒ v.
Spts. Terebenth. } f ʒij.
Spts. Vin. Rect. *a a* }

Place the acid in a Wedgewood mortar, and add the turpentine slowly, stirring it constantly with the pestle; then add the alcohol in the same manner, and continue stirring it until no more fumes arise, when it may be bottled, and should be stopped with a ground stopper. It should be prepared from the purest materials; and when done, it should exhibit a dark but clear red color, like dark blood; but if it be a pale, dirty red, it will be unfit for use. The dose is 40 drops, and the method of using it is as follows:—Put a teaspoonful of brown sugar in a common sized tea-cup, and rub in 40 drops of the balsam until it is thoroughly incorporated, and then slowly stir in water until the cup is nearly full, when it should be immediately swallowed. This dose may be repeated at intervals of an hour, until three or four doses are taken, if necessary; and its use should be discontinued when fresh blood ceases to flow. After standing a few days, a pellicle forms upon the surface of the balsam, which should be broken, and the liquid below it used. It does not deteriorate by age, if tightly stopped.—*N. Y. Med. Times.*

SURGERY.

Case of Pulsating Encephaloid Tumor of the Occiput. By JOHN NEILL, M. D., Surgeon to Pennsylvania Hospital.—In the February, 1854, number of the *Medical Examiner*, Dr. N. reports the particulars of a very unique case. The patient, a man aged 70 years, had, for many years, a small, hard tumor upon the right of the back part of the head, which never pulsated or gave him any pain until ten months before death. The tumor was sixteen inches in circumference around the base. The skin over the tumor was stretched and reddened, but not hot or tender, and could be moved freely upon the parts beneath. There was no pain or uneasiness in the tumor, except a sense of tension.

It had a *pulsation* distinctly perceptible both to the eye and touch, accompanied by a marked *aneurismal bruit*. The pulsation was not a simple rising and falling of the tumor, but an expansion in all directions.

The right occipital artery could be felt beating strongly and with a distinct thrill. Pressure upon it sensibly diminished the pulsation of the tumor, and pressure upon both occipitals almost entirely destroyed pulsation.

There was no swelling of the glands in the vicinity, and no other tumor about the body. The pulse was regular—the radials were not ossified—and the sounds of the heart were natural.

He died at the Almshouse, and after the post-mortem had been made I had an opportunity of examining a section of the head containing the tumor; it had encroached upon the cavity of the cranium, through an opening with rough and jagged edges, of about three inches in diameter.

The dura mater was pushed into the cranium, and was closely connected by its external surface with the tumor. The internal surface of the dura mater seemed perfectly healthy.

Upon cutting into the tumor, it presented the appearance of encephaloid cancer. The larger part of the section was of that white kind which so much resembles medullary matter, and the remainder had a pinkish grey tint, indicative of greater vascularity. The interior of the tumor was intersected with numerous dense bands, and in the intervals were several small cysts containing fluid.

About one inch and a half from the tumor there had been disease and absorption of a portion of the parietal bone. The opening in the bone was one inch in diameter, and seemed to be so regularly circular on one side that it appeared to have been made with a trephine. The pericranium and the dura mater did not seem to be diseased, but between the two there was a reddish material, so soft that it was almost semifluid.

The microscopic examination of these products showed their true cancerous nature.

When the material of the tumor was first examined, the cancer cell was much obscured by oil globules, which were so numerous as to suggest the idea that the growth was undergoing fatty degeneration. The cells were pale, large, irregular in form, and frequently folded and wrinkled. The nucleus was very large.

Remarks.—The reader will probably be surprised at the manner in which the foregoing case terminated. There was certainly a great want of correspondence in the physical characters of the disease, and those revealed by the post-mortem examination. Here was a pulsating tumor, with perfect aneurismal pulsation and bruit; pressure on the occipitals interrupted the pulsation, and the ligature subsequently destroyed the pulsation and bruit completely. The impression that it was an aneurism was irresistible, and I thought that it was a diffused aneurism. Subsequently, however, to the operation the pulsation returned, and doubts began to arise as to its aneurismal nature, still there was no reasonable grounds for such suspicions. Under such circumstances, the attention of any one would naturally be directed to the possibility of its being a disease of the brain or dura-mater, which had worn an opening in the skull, and that the pulsation was dependant upon that of the brain; but, if such had been the case, the pulsation would not have ceased upon the application of a ligature to the artery. And, moreover, such extensive disease of the brain or its membranes could hardly have existed so long without producing some functional disturbance.

Then, again, the subject of pulsating tumors in bone and osteo-aneurism would be brought to mind, but yet the position and characters of this tumor would not allow it to be included under this class of diseases.

The probability of its being cancer often occurred to me, but of course there could be no suspicion of its being a hard cancer or an osteo-sarcoma; and when, by feeling the tumor, the idea of a soft or medullary cancer was suggested, its pulsation, and the fact that that pulsation was once controlled by pressure upon an artery, at once counteracted the conclusion.

In fact, the case is a rare one. There is no record that I have yet seen of a *Pulsating encephaloid tumor of the occiput*, and on this account I have deemed the publication of this case as justifiable and useful.

Case of Tracheotomy, in Croup. By Prof. W. H. Van Buren, M. D.—The *N. Y. Med. Times* for Jan. 1854, contains a report of the proceedings of the N. Y. Medical and Surgical Society, in which we find that Dr. Van Buren reported recently to that Society "a case of croup, in which he performed tracheotomy, ten days before, and with very satisfactory results. The patient was a child five years old, and had been suffering with croupy symptoms about six days, before Dr. V. B. saw it. The obstruction to the respiration had been *gradually* increasing, and the breathing had at last become quite difficult, and paroxysms of suffocative cough were frequent. There had been, however, but little fever. At the second visit, the doctor found the pulse had arisen to 130, and the condition of the child threatening immediate death by strangulation. He accordingly opened the trachea, and inserted a tube thus giving immediate relief. , Four hours after, the rapidity of the pulse had very much diminished, several pieces of false membrane had

been discharged through the tube, and the breathing was comparatively easy. The case had steadily improved, and on the tenth day after the operation, the child was able to speak through the larynx. No medicine had been given since the operation. A single tube was first introduced, and afterwards a double one, with an opening in the convexity of the outer.

On the Internal Use of Chloroform. By HENRY HARTSHORNE, M. D.—The object of this article is chiefly to make some remarks upon its *dose* and *mode of administration.* Many practitioners within the writer's knowledge hesitate, from their recollection of its power as an anæsthetic, to give it in doses of more than a few drops; and as the drop is exceedingly small, such doses are really often insignificant. The writer can assert, from positive experience, that a fluidrachm of chloroform, taken by the stomach, is not more than equal, in soporific effect, to 30 or 35 drops of laudanum. In doses of 50 to 75 drops (about 15 minims), I have given it every half hour for several hours together. It differs from the opiate preparations in the promptness of its hypnotic action, the much shorter period of its duration, a less degree of cerebral oppression, and the absence of all stimulus to the circulation. It might be called a "diffusible narcotic," comparing in this respect with opium as ammonia does with alcohol. To produce much effect with it, repeated doses, at short intervals, will be necessary. The advantages which the above peculiarities afford in many instances of disease will suggest themselves to every physician. We may leave them to do so, proceeding to remark briefly upon its mode of administration.

The pungent property, already alluded to, causes it to require plentiful dilution, which is, of course, facilitated by the addition of some demulcent. Perhaps the *orgeat syrup* is the best. Every fluidrachm of chloroform should have at least two fluidounces of water with it when taken; and it will need, if in ordinary gum mucilage, considerable agitation to resuspend the particles immediately before swallowing. When taken in aqueous mixture alone, however, unless in very small doses, it produces nausea with some persons. This is entirely prevented by the addition of a strong aromatic, or, still better, by giving the chloroform in aromatic *tincture.* From the ready solution and kindred action of camphor with chloroform, their combination has become a very common one. For many purposes, however, a still better preparation is a sort of chloroform paregoric, or compound tincture of chloroform, *e. g.:* ℞. Chloroform f℥ij; sp. camph. et tinct. opii, āā f℥iss; Ol. cinnamon. gtt. viij; alcohol f℥iij. M. et fiat tinctura. Dose, from 5 to 30 minims, or more, as required.

The most admirable effects have been witnessed from the administration of chloroform, as above combined, in malignant cholera. In the summer of 1849, my attention was first called to it while attending a very severe case of cholera with the late Prof. W. E. Horner. The prompt and signal restoration accomplished in that case, from a state of collapse, was evidently due to the exhibition by Prof. Horner, every

five minutes, of a few drops of a combination of chloroform, oil of camphor, and laudanum, with ice, and warm frictions externally.—The writer's conviction was very strong that the *short interval* between the doses was an important item in the treatment; and in pursuing the same plan in a number of subsequent cases, several of which were of the most alarming violence, an extremely gratifying success was obtained. The opinion has thus been formed, that no other plan of treatment gives so much promise in the management of malignant cholera as a combination of powerful yet mild antispasmodics, such as above described, with ice, internally, and persisting external stimulation. It may be mentioned that the writer has added, with apparent advantage in a number of cases, sp. ammon., and occasionally creasote, in minute doses, to the preparation above designated as a compound tincture of chloroform. A formula of a very similar character is now quite extensively used as a gentle carminative and anodyne, or antispasmodic, and may be often substituted with benefit for the common paregoric.—*Am. Jour. Med. Sci.*

DISEASES OF FEMALES.

On the use of Sponge Pessaries. By Prof. A. P. Merrill, M.D. of Memphis.—The following remarks on the use of the Sponge Pessary we extract from the *Memphis Medical Recorder* for January, 1854. After citing cases, successfully treated by this pessary, Dr. Merrill says —"I have tried various plans of applying the sponge, all of which have been successful; but it may be that I have not yet fallen upon the best. The coarse and cheap sponge, cut into a globular form, of an inch and a half diameter, is sometimes used; sometimes pieces of a similar breadth, without regard to their shape; but, commonly, the patient is advised to provide some five or six fine sponges of a proper size, to be used in their natural state, without cutting. After clearing them of sand, and washing them in hot water, with soap, or in an alkaline solution, to soften them, each sponge is provided with a piece of twine, to facilitate its removal. This is passed through the sponge with a needle, so as to keep the smaller end downward. Before introduction, it is charged with thick lather of castile soap, or with elm mucilage, but it may sometimes be used without either. The frequency of renewal must depend upon the character and quantity of the vaginal discharge. If this is either profused or fetid, and during menstruation, the renewals should take place every two to four hours; otherwise, twice a day is sufficient. Under good management the relief afforded is striking and complete, and so little inconvenience does the sponge give, that the patient is rarely ever aware, from any sensation attending its use, even of its presence in the vagina. Any error that may be committed in the commencement, in the size of the sponges, will be likely to be corrected by the patient herself; but, in general, as the cure progresses the size may be reduced, and as this is done the sponge will recede higher up, and the walls of the vagina close beneath it with a healthy tonic contraction, which sometimes even increases the

resistance in its removal. When this is the case, and the tone of the parts is well restored, with no greater amount of secretions than in health, a renewal of the application once in every twenty-four hours will answer every useful purpose."

Analysis of Sixty-seven Cases of Inversio Uteri. By S. B. Hunt, M. D.—The total number of cases which I find on record is *sixty-seven.* Of these, *twenty-one* were reduced and recovered; *thirty-three* became chronic; and *thirteen* died.

The number of the labor is mentioned in *twenty-three* cases: *Nine* occurred in the first labor; *seven* in the second labor; *six* are mentioned as multiparous; and *one* occurred after abortion, at the fourth month.

The degree of inversion is mentioned in *forty-one* cases: *Thirty-five* were cases of complete inversion; and *six* were mentioned as partially inverted.

The time at which the accident occurred is noticed in *forty-five* cases: *Nineteen* of these happened immediately on the delivery of the child; *eight* on attempting to remove the placenta.

The remaining *eighteen* cases occurred: *One,* after removing the placenta by the hand in the uterus; *one,* simultaneously with the first after pain, seventeen minutes after the expulsion of the child; *three,* half an hour after the delivery of the child; *one,* eighteen hours after labor; *three,* three days after parturition; *one,* on the eighth day; *one,* on the twelfth day; *one,* on the fifteenth day; *one,* on the tenth day; *four* are mentioned as occurring at unknown periods; and *one,* nine days after abortion at the fourth month.

The condition of the placenta is mentioned in *thirty-seven* cases: In *eighteen* of these it is mentioned as adherent; in *nineteen* it was removed either before the occurrence of inversion, or without recognizing the difficulty; in *ten* cases the placenta was intentionally detached when adherent.

The records as to hemorrhage are very imperfect.

In only *six* cases is the degree of hemorrhage *before* removing an adherent placenta mentioned: In *one* of these it was slight—this case was fatal; in *five* it was large in amount—one of these was fatal.

The degree of hemorrhage, *after* detaching an adherent placenta, is mentioned in *ten* cases: In *eight* of these it is mentioned as slight; in *two* it was dangerous—one of these was fatal.

Hemorrhage is noticed after removing the placenta as usual, or before the accident in *five* cases.

In *eight* cases it is spoken of in general terms.

Of *two* cases where the placenta was returned with the uterus in the operation of reposition: *one* had fatal hemorrhage; while in the *other* it was slight.

In *five* cases no hemorrhage occurred.

Convulsions occurred in *three* cases; all of which were fatal.

Syncope in *twelve* cases.

Syncope, without hemorrhage, in *one* case.

There were *thirty-two* irreducible cases. Of these, *five* terminated by spontaneous reposition; *five* by strangulation and gangrene, followed by recovery; *four* are recorded as successful cases of *ligation; six* are mentioned as "extirpated" successfully; and *four* cases of ligation were fatal.

It will be seen that *one in three and a half* of the cases operated upon, died. Of the *eight* cases remaining, there is no record except of the *two* already quoted as in comfortable health years after the accident. I shall quote somewhat largely from the histories of these operations.

Of the *four* successful cases of ligation, *two* were tied, supposing them to be polypi. These, of course, are to be considered merely as fortunate terminations of unfortunate blunders.

The third of these cases is reported by Dr. Usher Parsons, of Rhode Island, in the *Boston Medical and Surgical Journal*, vol. xiv, p. 511. It was a partial inversion of four years' standing. There had been great suffering from alarming hemorrhage, leucorrhœa, nervousness, and uterine pain. The tumor was ligated just below the point of stricture, at the os tincæ. Four days after, the operation was completed by the knife and scissors. It resulted in a cure.

Of the fourth and last case of successful ligation, I have no record beyond the mere fact of the operation.

Of the *six* successful cases of "extirpation," it is not stated whether the knife or ligature was used. One of these was extirpated on the fourteenth day after labor, by an English surgeon—a most unjustifiable and ignorant proceeding.

Of the *four* cases of unsuccessful ligation, *one* was ligated immediately after delivery, the uterus being mistaken for a tumour in which the placenta was implanted. On the eighteenth day after, she was admitted into Boyer's ward, at La Charité. Seven days after, the ligated portion came away, and she died a few days later.

Another case was also ligated by mistake, six months after inversion. She died five days after the operation. The *two* remaining cases died of peritonitis occurring after the operation.

Thus of *fourteen* cases in which surgical interference took place, *ten* recovered and *four* died. Of the *four* who died, the operation was performed in ignorance of the true condition of the parts in *two* cases—a fact which would have more weight were it not that *two* of the successful operations were also in the same category of surgical blunders.—*Buffalo Med. Jour.*

MISCELLANEA.

Annual Meeting of the American Medical Association.—The seventh annual meeting of the American Medical Association will be held in the city of *St. Louis, Mo.*, on Tuesday, May 2d, 1854.

The secretaries of all societies and of all other bodies entitled to representation in the Association, are requested to forward to the undersigned, correct lists of their respective delegations *as soon as they may be appointed*,—and it is *earnestly* desired by the com-

mittee of arrangements that the appointments be made at as early a period as possible.

The following are extracts from article 2d of the constitution:

"Each local society shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half of this number. The faculty of every regularly constituted medical college or chartered school of medicine, shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing a hundred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate."

"Delegates representing the medical staffs of the United States Army and Navy, shall be appointed by the chiefs of the army and navy medical bureau. The number of delegates so appointed shall be four from the army medical officers, and an equal number from the navy medical officers."

The latter clause, in relation to delegates from the army and navy, was adopted as an amendment to article 2d of the constitution, at the last meeting of the Association held in New-York, in May, 1853.

E. S. Lemoine, M. D.,
One of the Secretaries, St. Louis.

Prof. John C. Dalton.—We have received from the class of the College of Physicians and Surgeons of this city a series of resolutions highly complimentary of this gentleman, which were passed at the conclusion of his recent course of Lectures on Experimental Physiology in that College, and tendering him a silver box, containing a "roll of double eagles," as a token of their appreciation of his efforts to instruct them in this abstruse science by means of experiment. Complimentary as are these resolutions, and valuable as was the gift, they are by no means unworthily bestowed. In the attempt to introduce the method of teaching physiology, so successfully pursued by Bernard, into our medical schools and colleges, Prof. Dalton deserves great credit, and we are gratified to receive this testimonial of favor emanating from his class. In his note of reply he makes the following just observations:—"The time is past when the student of medicine could be required to accept scientific doctrines unsupported by evidence, or to repose a blind confidence in the *ex cathedra* statements of his teacher. The instruction communicated to him must be of such a kind as to satisfy the intelligence, and not merely to fill the memory with second-hand opinions. He must not only learn the facts of medical science, but must know also how they have been ascertained. Neither can the medical profession of the United States continue to be dependent, for the means of scientific progress, on the assistance of foreign countries. Independent investigation, if properly conducted,

will accomplish here as much as it has done elsewhere; and the credit of the American name is to be sustained and exalted, not by depreciating the labors of foreign observers, but by emulating them."

Medical Journals. A new monthly medical periodical began its existence in this city with the present year, entitled the "American Medical Monthly." It is to be conducted by Profs. Horace Green, E. H. Davis, B. Fordyce Barker, R. O. Doremus, J. M. Carnochan, E. R. Peaslee, and E. H. Parker, and is under the editorial management of E. H. Parker, M. D., late of the New-Hampshire Journal. Much care is evinced in the preparation of its original, review, and editorial departments. This is the third monthly medical periodical which now represents the profession of this city, and we wish it all success in its high and honorable vocation.

As announced at the close of the second volume, the New-York Journal of Pharmacy has passed from the authority of the College of Pharmacy, and, at the commencement of its third volume, assumes an independent and individual existence. It is to be edited by Thomas Antisell, M. D., aided by Prof. Torrey, E. A. Kent, Dr. Enderlin, and B. Canavan.

We have regularly received the Medical Reporter, a quarterly journal, published under the direction of Chester County Medical Societies, Penn. The first number was issued July 1st, 1853.

Drs. F. G. Smith and J. B. Biddle have retired from the Medical Examiner, and Dr. S. L. Hollingsworth has succeeded to the editorial chair thus vacated.

The Stethoscope for January appears as the property and organ of the Medical Society of Virginia, edited by an association of physicians.

Medicinal Extract Works.—Our readers will observe that they are presented in this number with an illustration on steel of Messrs. Tilden & Co's. laboratory and gardens for the production of medicinal extracts. There are probably but few physicians in extensive practice who have not already become somewhat familiar with the quality and kind of these valuable auxiliaries to the successful practice of medicine. Since 1849, this establishment has been in successful operation, and produces annually from 10 to 15 thousand pounds. We are informed that there are under cultivation for the growth of material about forty acres, and that about thirty persons are constantly employed in the garden and factory. The products of this establishment, we are pleased to say, have fulfilled our most sanguine expectations; they have proved to be of uniform strength, and fully sustain the character which we gave them in our first notice in the 3d volume of the New Series of this Journal. That Messrs. Tilden & Co. have thus far been directly beneficial to the medical interests of the country, we have abundant evidence to believe, and we are pleased to see that, in addition to what they have already done, they announce that they are now prepared to furnish *fluid extracts* of a superior quality, and also blue mass of officinal strength.

State Medical Society.—Annual Meeting.—We regret that our crowded space does not allow of our presenting a particular account of the proceedings of this society at its annual convocation held in Albany on the 7th of February last. The session was one of unusual interest, and was characterized by much harmony and zeal for the great interests of medical science in this State.

OBITUARY.

Death of Dr. Hester.—Died at his residence, in New-Orleans, on the 1st of December, 1853, Abner Hester, M. D., Editor of the *New-Orleans Medical and Surgical Journal*, aged about 40 years, of Cholera Asiatica.

It is with feelings of sorrow, that we perform the melancholy task of recording the sudden demise of one of our confrères. Death has invaded our ranks, and taken from us one who was in the ascendent—an ardent lover of medical science and literature. Dr. Hester, we learn, from an obituary notice, written by his most intimate friend Dr. Fenner, was born in Mecklenburgh County, Virginia, but had removed with his parents in early life, to Montgomery County, Tennessee, where he was brought up on a farm. At an early age, he displayed talents and ambition which induced his parents to bestow upon him what assistance they could in the way of a *good education*. At about sixteen years of age, he was sent to Cumberland College in Princeton, Ky., where he displayed all the requisites of a good student—was very generally esteemed, and prided himself on being well prepared for his recitations. After graduating at this college, he entered the office of Dr. Walter H. Drane, of Clarksville, Tenn., as a student of medicine. His preceptor at that time was considered one of the ablest physicians in the state, and commanded a large and extensive practice. After the usual preliminary course of reading, Dr. Hester attended two courses of lectures in the University of Penn. and graduated in the spring of 1837, having selected as his theme for a thesis "Emetics." Soon after graduating, he settled at Holly Springs, in North Mississippi, where he practised his professsion with much credit, until the fall of 1839, when finding his field too circumscribed for his ambition, he settled in 1841-2 at New-Orleans. It was here that he formed the acquaintance of Dr. Fenner. In 1843, almost discouraged by his slow progress in practice, he thought seriously of again changing his residence. Happening to attend, professionally, a sea captain, he was persuaded by him to go to Merida, in Central America, and had actually packed up his clothes ready for starting. He was disappointed; the captain did not call, and he was forced to renew his efforts for a living in New-Orleans.

In January, 1844, Dr. Hester, with his friend Dr. Fenner, both then in rather desperate circumstances, embarked in the enterprise of starting a medical journal. The success of this journal has been almost unparalleled in the history of periodical medical literature. In the spring of 1846 he was appointed surgeon to one of the three regiments raised by Louisiana for the Mexican war. From this time

is dated the commencement of his rise as a practitioner. For seven years he had persevered in his efforts to get into practice, but had only succeeded so far as to make a bare support. Soon after his return from a three months' service in the war, he was elected Secretary to the Board of Health. In 1848 he was appointed, by the governor, a member of the Board of Medical Examiners for the Eastern District of Louisiana. He was appointed on several occasions Visiting Physician to the Charity Hospital. He was one of the Vice-Presidents of the Louisiana State Medical Society; and, at the time of his death, Port Physician of New-Orleans. As before stated, he was editor of the *New-Orleans Medical and Surgical Journal*, which still remains a monument to his untiring zeal and literary ambition. His sudden death in the meridian of his usefulness has caused a deep sensation among the members of the medical profession. That he was much esteemed by the public, is evidenced by the fact that he left an independent fortune to his widow.

Death of Dr. Cooke.—John Esten Cooke, M. D., died at his residence in Trimble County, Ky., on the 20th of Oct., 1853, in the seventieth year of his age. From the *Western Journal of Medicine and Surgery* we have gleaned in part the following particulars of the life of this original, and, in many respects, remarkable physician. Dr. Cooke's father having been a physician, his mind at a very early period was turned to the profession of medicine, in which, after having obtained a thorough collegiate education, he was carefully and thoroughly educated. At the age of 22, after complying with the requisites for graduation in 1805, he received the degree of Doctor of Medicine from the University of Pennsylvania. His thesis was entitled, "*An Inaugural Essay, being an account of the Inflammatory Bilious Fever which prevailed in the Summer and Fall of* 1804, *in the County of Loudon, Virginia.*" During the twenty years succeeding graduation, Dr. Cooke acquired an enviable reputation as a writer and practitioner of medicine. And so much attention had his writings attracted that, in 1825, he was elected president of the Med. Society of the Valley of Virginia, and in 1827 he was called to succeed Dr. Drake, who had retired from the Chair of Theory and Practice of Medicine in the medical department of Transylvania University. At this time he had made considerable progress in the organization of a medical school at Winchester, Va., where he resided, and where he had just published the first volume of "*A Treatise on Pathology and Therapeutics*," of which, in 1828, a second volume was published at Lexington. From Prof. Yandall we learn that "his first course of lectures was one of the most remarkable ever listened to by a class of medical students. Discarding all systems of nosology, Dr. Cooke presented a classification of his own. He had a theory which he believed explained the phenomena of almost every disease, and his lectures were taken up with an explanation of his theory and the practice founded upon it. The theory was a very simple one, and his practice as simple—that disease depends upon venous congestion, and is to be cured by remedies which act upon the liver. This is a statement of his views of

the pathology, not only of fevers, cholera, dysentery, &c., but menorrhagia, dysmenorrhœa, and most of the complaints of females. A view of pathology so simple could not fail to be attractive to his pupils, and it is safe to say that few teachers have exerted a greater sway over medical theory and practice than was exercised by Dr. Cooke for many years in the valley of the Mississippi. In February, 1828, Dr. Cooke, in connection with Dr. Short, commenced the publication of the *Transylvania Journal of Medicine and the Associate Sciences.* In 1837, having left Lexington, he was appointed to the chair of Theory and Practice of Medicine in the Medical Institute of Louisville. In the spring of 1844, having previously retired to a farm on the banks of the Ohio, near Louisville, he vacated his chair in the faculty of the Medical Institute, and retired from the turmoils of a public to the enjoyments of a private life. Few men have ever entertained so undoubted a faith in the certainty of medicine. Simplicity and candor were ruling traits in his character. Honesty, perfect ingenuousness and unswerving integrity, marked his conduct on all occasions, and singled him out among men. He contributed largely to sustain our peridical medical literature.

Death of Prof. Chamberlayne.—Died at his residence near the city of Richmond, Va., Lewis H. Chamberlayne, M.D., on the 28th of January last, aged — years. For sixteen years Dr. C. had occupied the chair of Materia Medica and Therapeutics, in the Medical Department of Hampden Sidney College, Richmond Va. He was one of the organizing members of the school. He was a graduate of the University of Pennsylvania of the class of 1817, having presented a thesis on "Intermittent Fever." He devoted himself with great ardor to his profession throughout a long and useful life. His lectures were characterized by much originality of thought, and his death is lamented by his numerous professional friends and the public.

Death of Dr. McClellan.—Samuel McClellan, M.D., died at his residence in the city of Philadelphia, on the 4th of Januray last, in the 54th year of his age. Dr. McClellan was the brother of the late distinguished Surgeon, Dr. George McClellan. He was for several years Professor of Midwifery in the Jefferson Medical College, and labored with great zeal and devotion, in the inception of this school, to sustain its interest. Laterly he had been wholly engaged in the discharge of the arduous duties of a general practitioner.

TO READERS AND CORRESPONDENTS.

With this number is brought to a successful close the twenty-second volume, and the eleventh year of the publication of the New York Journal of Medicine; and on this occasion we take pleasure in noticing the progress of the work in the favor of the profession—the many assurances which have reached us of the approbation of the profession upon our humble efforts. To boast of that progress and approbation is not our object, and it would illy become us, for we feel assured that it is owing more to the indulgence of a generous public, than to the merits of the work; still we would fain hope that this volume will be found not inferior to any of its predecessors. Of the fact that the means of enhancing the practical value of the forthcoming volume will daily augment, we can safely venture to predict, as we have the assurance of aid from sources hitherto not within our reach. But it is with indefatigable industry made manifest in every department of the work, that we hope to render this Journal still worthy of the flattering patronage with which it has recently been honored; and it is by performance, not promises, that we hope to maintain the confidence of our professional brethren and contribute our mite to the onward progress of the noble art of healing.

We claim the indulgence of several of our contributors; their papers, which are on file, shall receive an early insertion.

The Diseases of the Heart and the Aorta. By William Stokes, Regius Professor of Physic in the University of Dublin; author of "The Treatment and Diagnosis of the Diseases of the Chest," &c. Philadelphia: Lindsay & Blakiston, 1854. 8vo, pp. 689. (From the Publishers.)

Homœopathy Fairly Represented. A Reply to Professor Simpson's "Homœopathy" Misrepresented. By William Henderson, M.D., First American from the last Edinburgh Edition. Philadelphia: Lindsay & Blakiston, 1854. 8vo., pp. 302. (From the Publishers.)

On Rheumatism, Rheumatic Gout, and Sciatica, their Pathology, Symptoms, and Treatment. By Henry William Fuller, M.D., Cantab., Fellow of the Royal College of Physicians, London, &c., &c. New-York: Samuel S. & William Wood, 261 Pearl-street. 1854. 8vo, pp. 322. (From the Publishers.)

Elements of Human Anatomy; General, Descriptive, and Practical. By T. G. Richardson, M.D., Demonstrator of Anatomy in the Medical Department of the University of Louisville, &c., &c. Philadelphia: Lippincott, Grambo & Co. 1854. 8vo, pp. 734. (From the Publishers.)

Lectures on the Diseases of Infancy and Childhood. By Charles West

M.D., Fellow of the Royal College of Physicians; Physician to the Hospital for Sick Children, &c., &c. Philadelphia: Blanchard & Lea. 1854. 8vo., pp. 487. (From the Publishers.)

History of the Epidemic Yellow Fever at New-Orleans, La., in 1853. By E. D. FENNER, M.D., President of the Louisiana State Medical Society; one of the Visiting Physicians of the New-Orleans Charity Hospital, &c., &c. New-York: Hall, Clayton & Co., Printers. 1854. 8vo, pp. 84. (From the Author.)

Tableau of the Yellow Fever of 1853, *with Topographical, Chronological, and Historical Sketches of the Epidemics of New-Orleans since their Origin in* 1796, *illustrative of the Quarantine Question.* By BENNET DOWLER, M.D., Corresponding Member of the Academy of Natural Science of Philadelphia, &c., &c. (From the Author.)

A Report to the Indiana State Medical Society on Asiatic Cholera, as it prevailed within the State of Indiana during the Years 1849, 1850, 1851 *and* 1852. *With Observations on the Laws which govern its Progress.* By GEORGE SUTTON, M.D. Indianapolis: Elder & Harkness, Printers. 1854. 8vo, pp. 67. (From the Author.)

A Report on the Health and Mortality of the City of Memphis, for the Year 1843. By CHARLES T. QUINTARD, A.M., M.D., Professor of Physiology and Pathological Anatomy in the Memphis Medical College. (Published by order of the City Council.) Memphis, 1854. 8vo, pp. 32. (From the Author.)

Constitution and By-laws of the Medical Association of Texas. Instituted Jan. 17*th*, 1853. *Incorporated by the fifth Legislature*, 1853–54. *Proceedings of the last Annual Meeting, together with the Anniversary Address, delivered by* GEORGE CUPPLES, M.D., November, 1853. Austin: Jo. Walker, Printer. 1854. 8vo, pp. 30. (From Dr. Cupples.)

The following Journals have been received in exchange:

The American Journal of Dental Science; edited by CHAPIN A. HARRIS, M.D, A. A. BLANDY, M.D., and A. S. PIGGOT, M.D.; for April. (Quarterly. Philadelphia.)

The Peninsular Journal of Medicine and the Collateral Sciences; edited by E. ANDREWS, A.M., M.D.; for March and April. (Monthly. Ann Arbor, Mich.)

The American Journal of the Medical Sciences; edited by ISAAC HAYS, M.D.; for April. (Quarterly. Philadelphia.)

The American Journal of Insanity; edited by the Officers of the N. Y. State Lunatic Asylum; for April. (Quarterly. Utica.)

The American Journal of Pharmacy; edited by JOSEPH PARRISH, M.D., and WM. PROCTOR, M.D.; for March. (Bi-monthly. Philadelphia.)

The New-Jersey Medical Reporter, and Transactions of the New-Jersey Medical Society; edited by P. W. BUTLER, M.D.; for Sept. and Oct. (Monthly. Burlington.)

The Medical Examiner and Record of Medical Science; edited by F. G. SMITH, M.D.; and JOHN B. BIDDLE, M.D.; for March and April. (Monthly. Philadelphia.)

The Charleston Medical Journal and Review; edited by D. J. CAIN, M.D., and F. P. PORCHER, M.D.; for March. (Bi-monthly. Charleston.)

The New-Orleans Medical and Surgical Journal, devoted to Medicine and the Collateral Sciences; edited by B. DOWLER, M.D.; for March. (Bi-monthly. New-Orleans.)

Southern Medical and Surgical Journal; edited by L. A. DUGAS, M.D.; for March and April. (Monthly. Augusta.)

Buffalo Medical Journal and Monthly Review of Medical and Surgical Science; edited by AUSTIN FLINT, M.D., and S. B. HUNT, M.D.; for March and April. (Monthly. Buffalo.)

The North-Western Medical and Surgical Journal; edited by W. B. HERRICK, M.D., and H. A. JOHNSON, M.D.; for March. (Monthly. Chicago and Indianapolis.)

Kentucky Medical Recorder; edited by H. M. BULLITT, M.D., and R. J. BRECKENRIDGE, M.D.; for March. (Monthly. Louisville.)

The Western Lancet and Hospital Reporter; edited by L. M. LAWSON, M.D., and T. WOOD, M.D.; for March and April. (Monthly. Cincinnati.)

The Memphis Medical Recorder; edited by Prof. A. P. MERRILL, M.D., and Prof. C. T. QUINTARD, M.D.; for March. (Bi-monthly. Memphis, Tenn.)

The Medical Reporter; a Quarterly Journal, published under the direction of the Chester and Delaware County Medical Society; for April. (Quarterly. West Chester, Pa.)

Iowa Medical Journal, conducted by the Faculty of the Medical Department of Iowa University; for March. (Monthly. Keokuk, Iowa.)

The New-York Medical Times; edited by H. D. BULKLEY, M.D.; for March and April. (Monthly. New-York.)

The New-York Medical Gazette; edited by D. M. REESE, M.D.; for March and April. (Monthly. New-York.)

The Boston Medical and Surgical Journal; edited by J. V. C. SMITH, M.D.; March and April numbers received. (Weekly. Boston.)

The Western Journal of Medicine and Surgery; edited by L. P. YANDELL, M.D, and T. S. BELL, M.D.; for March. (Monthly. Louisville.)

The Ohio Medical and Surgical Journal; edited by JOHN DAWSON, M.D.; for September. (Bi-monthly. Columbus.)

The Stethoscope and Virginia Medical Gazette; edited by ——; for March and April. (Monthly. Richmond, Va.)

Nashville Journal of Medicine and Surgery; edited by W. K. BOWLING, M.D., and PAUL F. EVE, M.D.; for March. (Bi-monthly. Nashville, Tenn.)

The New-Orleans Medical News and Hospital Gazette; edited by ——; for March and April. (Bi-weekly. New-Orleans.)

Nelson's Northern Lancet and American Journal of Medical Jurisprudence; edited by HORACE NELSON, M.D.; for March and April. (Monthly. Plattsburgh, N.Y.)

American Medical Monthly; edited by E. H. PARKER, M.D.; for March. (Monthly. New-York.)

The New-Hampshire Journal of Medicine; edited by GEORGE H. HUBBARD, A.M., M.D.; for March and April. (Monthly. Concord, N. H.)

New-York Journal of Pharmacy; edited by THOMAS ANTISELL, M.D.; for September. (Monthly. New-York.)

The Western Medico-Chirurgical Journal; edited by J. F. SANDFORD, M.D.; for March. (Bi-monthly. Keokuk, Iowa.)

The Journal of Psychological Medicine and Mental Pathology; edited by FORBES WINSLOW, M.D.; for January. (Quarterly. London.)

Dublin Quarterly Journal of Medical Science; edited by ——; for February. (Quarterly. Dublin, Ireland.)

☞ *August, 1853, number not received.*

Dublin Medical Press; edited by ——; for March and April. (Weekly. Dublin.)

The Medical Chronicle or Montreal Monthly Journal of Medicine and Surgery; edited by W. WRIGHT, M.D., and D. C. MCCOLLEM, M.D.; for March and April. (Monthly. Montreal.)

The Upper Canada Journal of Medical, Surgical, and Physical Science; edited by ——; for March. (Monthly. Toronto.)

Monthly Journal of Medical Science; edited by ——; for Sept. and Oct. (Monthly. Edinburgh.)

☞ Communications intended for publication, and Books for Review, should be sent, *free of expense*, directed to Drs. Purple and Smith, Editors of the New-York Journal of Medicine, 183 Hudson-street, *New-York*. Persons at a distance may direct parcels, or exchanges (*paid*), as above, under cover, to M. J. B. Bailliere, Rue Hautefeuille, *Paris;* or H. Bailliere, 219 Regent-street, *London;* or Lindsay & Blakiston, *Philadelphia;* or Wm. B. Ticknor & Co., *Boston*. The attention of Correspondents is respectfully requested to the above, as the Publishers are frequently subjected to unnecessary expense for postage and carriage.

All remittances of money and letters on the *business* of the Journal should be directed to the Proprietors.

☞ Particular attention is requested to the above, as parcels, communications and exchanges have failed to reach us, owing to inadvertence, or want of attention to these notices.

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The Diseases of the Breast and their Treatment. By JOHN BIRKETT, Fellow of the Royal College of Surgeons of England. (The Dissertation to which the Jacksonian Prize for 1848 was awarded by the Council of the Royal College of Surgeons of England.) London, 1850. pp. 264. With Plates.

ART. XII.—A Treatise on Acute and Chronic Diseases of the Neck of the Uterus. Illustrated with numerous Plates, colored and plain. By CHARLES D. MEIGS, M.D., Professor of Midwifery and the Diseases of Women and Children in Jefferson Medical College, &c., &c. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 116, plates 22. . . . 414

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